

CORNELL UNIVERSITY
OFFICIAL PUBLICATION

ANNUAL REPORT OF PRESIDENT EDMUND EZRA DAY
FOR THE YEAR 1947-1948

With Appendices containing Reports of the Deans and other Officers

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Report of the President

TO THE BOARD OF TRUSTEES OF CORNELL UNIVERSITY:

I HAVE THE HONOR to present the following report for the academic year 1947-1948. Reports of the deans, the directors, and the heads of independent divisions may be found in the appendices. These describe in detail the operations of the several divisions of the University, and are commended to your attention. A summary of changes in the Board of Trustees is also included. The financial report of the Treasurer will be sent to you separately.

THE PARADOX OF LEADERSHIP

Cornell University is about to conclude its first fourscore years of adventure and achievement. As academic institutions go, that is a relatively short time. If you observe academic processions where the representatives march in the order of institutional seniority, you will find the representative of Cornell well toward the end of the line.

The amazing thing is that so youthful an institution should have accomplished so much. It is almost incredible that a short three generations ago Cornell was little more than a collection of ideas in the minds and hearts of two great men.

The essential paradox of Cornell—its youthfulness and yet its leadership—stems from the quality of those ideas which animated Ezra Cornell and Andrew D. White. Eighty years ago, on the hilltop above Cayuga, they brought together, in a single institution, the significant ideals and policies that differentiate the modern university from the previous church-dominated college. The revolt led by Cornell ultimately established a new pattern of higher education in America. Hence our University became a patriarch in its infancy.

THE SIZE OF THE UNIVERSITY

In recent years, Cornell has attained greatness in complexity and size as well as in pioneering. We now have fourteen separate faculties on two campuses. There are in Ithaca five endowed divisions—Architecture, Arts and Sciences, Business and Public Administration, Engineering, and Law; four State colleges—Agriculture, Home

Economics, Industrial and Labor Relations, and Veterinary Medicine; two cross-section schools, which combine the resources of the endowed and State divisions—Education and Nutrition; and the Graduate School. There are two schools—Medicine and Nursing—in New York City. And supplementing the work of these fourteen divisions are such enterprises as the Aeronautical Laboratory in Buffalo and the Agricultural Experiment Station in Geneva. Cornell spans the State with activities implementing a range of interests which, though not all-inclusive, is certainly in the spirit of Ezra Cornell's dictum: "I would found an institution where any person can find instruction in any study."

Cornell is not only complex; it is large. In the fall of 1947, we had enrolled on the Ithaca campus approximately 9,600 students. We had some 450 more in New York City. Hence the total enrollment was slightly more than 10,000. During the second term, we had approximately 9,200 in Ithaca, and a grand total of approximately 9,700.

TABLE A. NUMBER OF STUDENTS ENROLLED BY COLLEGES AND SCHOOLS IN THE ACADEMIC YEARS 1936-1937 TO 1947-1948 INCLUSIVE

	Entire University & Arts excluding duplicates					Separate Colleges and Schools										Bus. & Pub. Adm.			Nurs-ing			Grad.
	Sci.	Eng.	Arch.	Agr.	Home Econ.	I & L R	Hotel	Vet.	Nutr.	Pub. Adm.	Law	Med.										
1936-37	6341	1883	938	135	1358	417	...	254	151	...	156	299	...	935								
1937-38	6684	1980	1025	129	1513	449	...	271	154	...	149	289	...	955								
1938-39	7055	1886	1145	136	1616	479	...	291	163	...	186	288	...	1050								
1939-40	7174	1827	1269	140	1651	479	...	326	164	...	207	296	...	1000								
1940-41	7315	1881	1384	147	1568	492	...	326	160	...	191	295	...	967								
1941-42	7148	1894	1580	142	1458	512	...	319	157	...	162	314	...	722								
1942-43	6850†	1815	1689	118	1214	529	...	251	199	...	68	309	169	596								
1943-44	4320†	1355	821	67	460	649	...	70	41	...	49	42	320	612								
1944-45	4783†	1552	661	86	552	684	...	105	148	...	53	68	364	625								
1945-46	7928†	2075	1556	162	1127	640	173	287	154	...	229	327	270	1050								
1946-47	10560	2522	2667	208	1660	640	277	417	133	20	41	355	322	233	1217							
1947-48	10830	2551	2648	229	1619	632	316	414	145	42	94	378	315	213	1391							

†Civilian students only are included in the figures for these four years.

TABLE B. NUMBER OF DEGREES GRANTED BY COLLEGES AND SCHOOLS IN THE ACADEMIC YEARS 1936-1937 TO 1947-1948 INCLUSIVE

	Entire University & Arts					Separate Colleges and Schools										Bus. & Pub. Adm.			Nurs-ing			Grad.
	Sci.	Eng.	Arch.	Agr.	Home Econ.	I & L R	Hotel	Vet.	Nutr.	Pub. Adm.	Law	Med.										
1936-37	1379	370	152	25	177	106	..	30	35	..	42	71	..	371								
1937-38	1446	383	156	24	237	89	..	43	31	..	48	66	..	369								
1938-39	1493	404	148	25	254	87	..	49	40	..	53	63	..	370								
1939-40	1581	441	158	14	268	104	..	44	43	..	55	70	..	384								
1940-41	1647	411	185	15	287	121	..	71	38	..	52	63	..	404								
1941-42	1439	349	217	17	240	104	..	48	43	..	59	75	..	287								
1942-43	1384	360	204	18	201	107	..	53	37	..	28	75	10	291								
1943-44	1213	287	287	12	86	129	..	9	79	..	17	75	19	213								
1944-45	1250	293	246	14	69	198	..	14	32	..	9	156	19	200								
1945-46	1288	303	217	12	116	160	..	17	67	..	20	80	16	280								
1946-47	1931	544	355	23	221	108	11	78	35	1	51	83	54	367								
1947-48	2595	639	507	33	246	170	81	89	1	11	33	106	78	527								

How the University has increased in size during the last twelve years is shown by the tables above, which give comparative figures on the number of students enrolled and the number of degrees awarded.

There are some who think that the University has become too large and wish that it could somehow return to the good old size of the good old days. Candidly, I must say that that wish is not likely to be fulfilled. There are two reasons. First, college enrollment in this country has increased enormously since the War. Prewar, the total enrollment in American colleges and universities was approximately 1,500,000. In 1947-1948, it has been approximately 2,500,000. The increase has been caused in part, but not entirely, by picking up the accumulated deferment of education on the part of men and women who saw military service. Every institution has been affected by it.

The expansion at Cornell has been considerably less, proportionately, than the total expansion in national enrollment. Our expansion carried us from a prewar maximum of about 6,900 on the Campus in Ithaca to a total in 1946-1947 of 9,200. That was almost exactly a one-third increase. Last fall we stepped it up another 400, to 9,600. In other words, our increase has been about 35 per cent, whereas the national increase has been of the order of 70 to 75 per cent—practically double that at Cornell.

In view of the obligation of existing institutions to service this new demand for higher education, it seems to me unthinkable that Cornell should have done less. We have expanded to the limit of our facilities and capacity to maintain our traditional standards of instruction. We have not gone beyond that.

THE DECREASE IN VETERANS

The proportion of veterans, incidently, is rapidly declining. In the class which entered two years ago, it was close to 60 per cent; in the class which enters this fall, it will be only 15 per cent. We are turning these veterans out rapidly by graduation. Generally speaking, they have learned how to work effectively; they are carefully selected; and many of them are married. All these conditions, believe it or not, are conducive to good academic performance. The statistics indicate that the veterans, if single, do slightly better than the ordinary civilian undergraduates; if married, they do still better; and their grades are even higher if they have children.

We have approximately as many women students now as we had

before the War, and there is no intention of reducing the number. On the other hand, under the assurances we give of proper chaperonage and housing, the number cannot be increased. Consequently, the proportion of women in the Cornell constituency in Ithaca has declined from a prewar 24 per cent to a present 20 per cent.

The other reason why we are not likely to go back to the prewar size is that we have substantially increased during the last four years the range of University offerings. We have added five divisions to the University: a School of Business and Public Administration, a State School of Industrial and Labor Relations, a School of Nutrition, a School of Nursing, and a Graduate School of Aeronautical Engineering. In my opinion, that rounds out the academic offering which the University should now provide; I see no additional divisions in early prospect. Even so, an increase in the total number of students is inevitable, unless we propose to contract some of the divisions that have been here for many years. If we put these five schools together, and add such changes as the five-year program in Engineering and the larger problem of servicing other divisions which now falls on the College of Arts and Sciences, it would seem to be perfectly clear that there is no chance whatever of wisely cutting Cornell back to its prewar dimensions. It will remain roughly at its present size.

THE ADMISSIONS PROBLEM

One of the most difficult problems in administration during the past two years has been that of admissions. In certain quarters, the problem has become almost fantastic. To cite one concrete example: in the Medical College, where we can take only 80 students in each entering class, there were for the class recently admitted for the fall more than 3,200 qualified applicants. In other words, there were 40 candidates for every available place. For each student accepted, 39 possible students had to be rejected. That is the extreme case, but there are other situations almost as difficult, the nearest approach being that of an attractive, capable, qualified young woman who entertains an ambition to enter the College of Arts and Sciences. She is in the midst of similar competition. We could fill the entire contingent of women in that college with the daughters of Cornellians.

Inevitably there have been questions as to the extent to which we give preferment to so-called legacies. If you look at the ratio of legacies admitted to total legacy candidates, and compare that with the ratio of non-legacy admissions to non-legacy candidates, you will discover the extent of preferment we have been giving as a matter of policy.

It is my considered opinion that we have gone in that direction as far as we wisely can. If we are to retain the idea that this is an institution designed to serve the American people, we cannot exclude prospective students who, judged by general objective standards, are substantially better than those we admit. We have to compromise a variety of considerations. I hate to think what our problem would be if we had not increased the size of the University.

NEW ACADEMIC PROGRAMS

Meanwhile, on the side of instruction, the University is constantly introducing rather exciting, certainly challenging innovations. We have had a variety of them in the postwar period. Nuclear physics is a case in point. We are fortunate to have here one of the most notable groups of nuclear physicists in American academic life. Happily, we have succeeded in keeping that group together. To do so, we have had to commit ourselves to substantial additions both to the physical plant and to the annual budget. The Nuclear Studies Laboratory is finished and will be formally dedicated this fall. The Accelerator Building, attached to it, has been completed for some time, and the synchrotron housed in it is being cautiously operated. That is an exciting program, much of which is unintelligible to the layman, but enough of which can be caught and understood to provide a genuine thrill. The problem, from the point of view of administration, is not to control nuclear forces but to control nuclear physicists. They are in tremendous demand, and at a frightful premium. How we have managed to retain the men we have here I don't altogether know, except that they have extraordinary esprit de corps and apparently enjoy both being together and being at Cornell.

There are interesting innovations of professional training in the Law School and the College of Architecture, as well as in other divisions which I have mentioned in previous reports. We have an extraordinary program of experimental language instruction going on here. We are the national headquarters for the development and testing of accelerated methods of teaching languages, devised and widely used in Army training during the War. We have all the modern paraphernalia for learning a foreign language so that you can actually speak it.

The new program in metallurgy in the College of Engineering has become so significant that we have renamed one of the divisions the School of Chemical and Metallurgical Engineering. Tremendous impetus was given to this program during the year by the establishment of the Francis Norwood Bard Professorship of Metallurgical

Engineering, named for the donor, a distinguished alumnus who provided a generous endowment for the chair.

Our new adventure in the field of industrial and labor relations is unquestionably proving its worth. There are some, of course, who still doubt the wisdom of entering into a field so highly controversial. My own contention is that the more knowledge and understanding we can throw into this area, the better the American people will be served. That is what an educational institution is for. Personally I take pride in the fact that Cornell is pioneering to bring the forces of disinterested, objective, competent instruction and research to bear on these exceedingly explosive problems. That is in the Cornell tradition. It is the way Cornell has always pioneered and, I hope, will always pioneer.

On the research front we have staged an even greater expansion of activity since the War than we have in enrollment or in widening the range of courses. Before the War, the total research funds annually employed in the different parts of the University were of the order of \$2,000,000. For the year 1947-1948, the comparable amount was approximately \$7,000,000. The total amount made available including contract research to be completed over a period of several years, exceeded \$12,000,000. The largest single block is in the Aeronautical Laboratory in Buffalo, where there is something like \$7,000,000 of research now under contract. Of the remainder, nearly \$2,000,000 is in contract research with Governmental agencies, which have sought to place all sorts of projects in the hands of the distinguished scientists and scholars on the Cornell roster.

THE ADMINISTRATION AND TRUSTEES

Because of the magnitude of this research program, now one of the largest operations within the University, the Board of Trustees has authorized the appointment of a Vice President for Research. We have been fortunate in drawing to the staff Dr. T. P. Wright, who was formerly Civil Aeronautics Administrator. Vice Presidents have also been appointed to have general oversight of other areas which have vastly increased in importance in recent years. George F. Rogalsky has become Vice President for Business, relinquishing the post of Treasurer to Lewis H. Durland. Asa S. Knowles, President of the Associated Colleges of Upper New York State, has been made Vice President for University Development, succeeding Robert A. Doyle who resigned after taking an active and effective part in the organization of the Greater Cornell Committee.

Cornell sustained a severe loss late in the spring, when Provost Arthur S. Adams resigned to accept the presidency of the University of New Hampshire. His unusual qualities of leadership had been shown in many areas, notably the operation of the Aeronautical Laboratory, the integration of the University's program of contract research, and the provision of housing for the expanding population of students and Faculty. The new Provost is Professor Cornelis W. de Kiewiet, for the past three years Dean of the College of Arts and Sciences.

Professor Leonard S. Cottrell, chairman of the Departments of Sociology and Anthropology and Rural Sociology, has been appointed as the new Dean of the College of Arts and Sciences, and Professor Charles W. Jones has succeeded Professor G. Watts Cunningham as Dean of the Graduate School. The vacancy in the Office of the Secretary of the University was filled during the winter by moving Raymond F. Howes from the staff of the Vice President for University Development.

The death of Paul A. Schoellkopf last September was a cause of grief to all Cornellians. A former president of the Cornellian Council and generous contributor to the athletic facilities of the University, he had been a member of the Board of Trustees since 1939. The Board also lost, by retirement in June, Ezra B. Whitman, who had served for 27 years. He and Roger H. Williams, who retired in June 1947, were elected to the newly created posts of Trustees Emeritus. Three new members were elected by the alumni in the spring: J. Carleton Ward, Jr., Jacob Gould Schurman, Jr., and John S. Parke. All will bring strength to the Board, which was partially reorganized in June, with Arthur H. Dean succeeding Howard E. Babcock as chairman of the executive committee.

Thirty members of the Faculty were lost during the year by death or retirement. They are listed in the appended report of the Dean of the University Faculty.

THE FINANCIAL PROBLEM

Maintaining financial balance has come to be the largest single problem in guiding the affairs of the University. To accommodate the greatly increased enrollment of students we have had to make a variety of financial commitments, and the surplus which we had previously built up has now been entirely absorbed. To some extent, we have had to move into an accumulated deficit.

On the side of the so-called academic budget operation, we have continued to operate "in the black." That has been true ever since

1937, when I came into office. The year-end figures for the academic year 1947-1948 show a surplus for the endowed colleges in Ithaca of \$36,344, and a deficit for the Medical College of \$13,799, leaving a net surplus of \$22,544. To administer the academic program in such a way as to show a surplus has not been easy in a total annual operation which now amounts to something over \$16,000,000—the current academic consolidated budget for 1947-1948.

That figure excludes the so-called auxiliary enterprises, like dining and residential halls, which total another \$4,000,000. Of the \$7,000,000 of research funds, some \$3,000,000 are outside this consolidated academic budget, so that to find a grand total for the University as a whole, you add \$16,000,000, \$4,000,000 and \$3,000,000. Cornell is a \$23,000,000 business annually.

To keep a \$23,000,000 business in some measure of fiscal balance when you have very little control over the price of your product and have gone the limit in expanding the volume, as we have, takes a considerable amount of managing. Despite additional increases in tuition, approved by the Trustees for several divisions, and vigorous efforts to make further economies in operating costs, we start the year 1948-1949, under the projected budget, with a nominal deficit of approximately \$600,000. That deficit has been assumed because we did not see how otherwise to maintain the services of the University and to deal fairly with the Faculty, who have suffered seriously from the rapid increase in the cost of living without commensurate increases in salary. The emergency program to improve Faculty salaries is the largest single item of increase in the new budget, but all costs of operation are still rising. As one illustration—an inescapable item—we shall have to pay \$75,000 more for coal.

THE GREATER CORNELL COMMITTEE

During the past year, a careful survey of the problem of University development was made jointly by the Trustees, administrative staff, and alumni. This resulted in the organization of the Greater Cornell Committee, which brings together, in a thoroughly coordinated arrangement, several essentially related fund-raising activities of the University. An Office of University Development at Ithaca has been set up to furnish the administrative organization necessary to implement the work of the Committee.

The chief responsibility of the Greater Cornell Committee is to add to the available resources of the University. In addition, it has these

other duties: (1) to make recommendations regarding policies and affairs of the University; (2) to consult and advise in connection with the work of the Development Office; (3) to mobilize alumni and others in carrying out approved undertakings; (4) to render assistance in coordinating fund-raising activities by and on behalf of the University and allied organizations; and (5) to perform other general activities as may from time to time be assigned to the Committee and accepted by it.

The Committee has announced a Greater Cornell Fund campaign, to be launched this fall, as the first step toward a much larger Greater Cornell Fund needed for fulfillment of plans formulated for the future development and growth of the University. The University needs which have been given priority by the Planning and Development Committee of the Board of Trustees and which are to benefit from this first campaign are the following:

Faculty Salaries	\$ 3,000,000
Medical College	2,500,000
Engineering Buildings (next step in Engineering Development Program)	2,000,000
World War II Memorial, Building and Endowment of the Interfaith Center (C.U.R.W.)	1,500,000
Nuclear Studies Laboratory	1,500,000
Research Fund (to be used chiefly in the social and humanistic fields)	1,000,000
Working Capital	750,000
Athletic Plant	250,000
Total	<hr/> \$12,500,000

There is a second category of needs which have been designated by the Planning and Development Committee of the Board of Trustees as urgent but upon which immediate action, insofar as fund raising is concerned, has been deferred. These needs include:

University Library and maintenance endowment	\$ 6,000,000
Student Dormitories	5,000,000
Sports Buildings	3,000,000
Engineering Buildings, additional	2,000,000
Student Health Building	1,000,000
Medical College, additional	2,500,000

In addition to these buildings, \$500,000 increased annual income is needed, to be received through additional endowment and through increasing the annual Alumni Fund.

The Greater Cornell Committee has long-range functions and objectives. Through it the Trustees are sharing with alumni and others the responsibility for maintaining Cornell's position of leadership in higher education. By opening avenues of funds for Cornell, as well as by giving Cornell its best advice and counsel, the members of the Greater Cornell Committee, and other loyal Cornellians whom they represent, will play an important role in shaping the services to be rendered by the University to future generations.

The Alumni Fund will continue to be a very important agency in the general development program. I have been enormously gratified to see the step-up in efficiency of organization and procedure, and a corresponding step-up in enthusiasm and devotion in connection with that annual contribution of thousands of alumni to Cornell; and I hope the alumni are fully aware that I am immensely grateful.

THE PRESERVATION OF FREEDOM

Just what lies ahead for this institution, under present circumstances, no one can tell. These are times in which prediction as to the economic, political, and social outlook is both difficult and hazardous. I am reasonably confident, however, that the type of attachment which lies in the great company of Cornellians is going to see this institution through.

One great issue looms ahead. Can these institutions, such as Cornell, which over the years have depended on private support and have enjoyed all the advantages of independence stemming from private status, continue to maintain themselves effectively as private institutions? If this country ever loses its ways of freedom, its democratic tradition, its organization as a great self-governing nation, that will come about, if I am not mistaken, through no deliberate adverse decision on the part of the American people. It will come about, if it does, through a subtle corrosion of our social institutions.

There is an unmistakable drift toward Government in all our affairs. Much of that is essentially sound, but we must be on guard against too much of it. We must retain private initiative and management in certain important fields, and certainly some of it in higher education. In that field, more than in any other, it is of paramount importance to preserve private institutions, setting the pace for the publicly supported and protecting to the utmost the conditions of complete freedom

and independence. That is the issue, which, as I see it, is bound to come into the open in the course of the next few years; and we are putting that issue to an acid test in this effort which we are just launching through the Greater Cornell Committee.

Cornell has rendered a great service; it still has a tremendous potential; it is entitled to all the resources we can bring to its aid. I am confident those added resources will carry it to even greater achievements.

EDMUND E. DAY,

President of the University.

SUMMARY OF CHANGES IN THE BOARD OF TRUSTEES

To the President of the University:

SIR: I have the honor to report the following changes which occurred in the organization and personnel of the Board of Trustees, its committees, and its representation on administrative boards and on advisory councils during the academic year 1947-1948.

ORGANIZATIONAL CHANGES

Sub-Committee on Finance of the Executive Committee

On August 8, 1947, by action of the Executive Committee, a Sub-Committee on Finance was established, consisting of the President of the University, the Chairman of the Board, and the Chairmen of the Standing Committees of the Board, plus one additional member of the Executive Committee. During the past year Mr. Maxwell Upson served as that member, and for the next year Mr. H. E. Babcock has been designated the additional member. The purpose of the Sub-Committee is to exercise closer study and supervision over the financial problems of the University.

Trustees Emeritus

At its meeting on January 24, 1948, the Board established the position of Trustee Emeritus and provided that that title may be conferred on a Trustee of the University, who has served with distinction as a Trustee an aggregate of not less than fifteen years and whose term of office as Trustee has expired or is about to expire. It was also provided that the term of an Emeritus Trustee shall be for life and that he shall have the right to attend meetings of the Board and participate in its discussions but shall not have the right to vote. By later action, service of Emeritus Trustees on Standing Committees was authorized. At the June 14, 1948, meeting the Board elected Ezra B. Whitman and Roger H. Williams as the first Emeritus Trustees of the University. Mr. Whitman, whose term expired June 30, 1948, had served as Trustee for twenty-eight years, and Mr. Williams, whose term expired in June, 1947, had also served as Trustee for twenty-eight years.

Greater Cornell Committee

On October 10, 1947, the Board established the Greater Cornell Committee as an agency of the Board of Trustees for the purpose of promoting the interests and aiding in the development of the University and of raising funds for the University. The Chairman of the Board, the Chairman of the Executive Committee of the Board, the Chairman of the Planning and Development Committee, and the President of the University are all *ex officio* members of the Committee and its Administrative Group. The two members of the Board elected to the Administrative Group of the Greater Cornell Committee for a period until June 30, 1949, are Trustees Robert E. Treman and Victor Emanuel. All members of the Board of Trustees are members-at-large of the Greater Cornell Committee.

BOARD MEMBERSHIP

Harold Keller, Commissioner of Commerce for the State of New York, assumed his duties as an *ex officio* member of the Board on January 24, 1948.

Van C. Whittemore, an *ex officio* member of the Board as President of the New York State Agricultural Society, resigned that post on October 9, 1947. He was succeeded on the Board by Earl B. Clark.

The death of Paul A. Schoellkopf on September 30, 1947, was reported with sorrow. He was an Alumni Trustee from June, 1939, until his death.

John S. Parke was elected by the Cornell Alumni Association to complete the term of Paul Schoellkopf, which expires June 30, 1949.

On June 14, 1948, the Cornell Alumni Association elected J. Carlton Ward and Jacob Gould Schurman as Trustees of the University for five-year terms beginning July 1, 1948, filling the vacancies caused by the expiration of the terms of Thomas I. S. Boak and George H. Rockwell.

Dean Joseph C. Hinsey was re-elected as Faculty Representative of the Medical College to the Board for a three-year term beginning January 1, 1948.

The term of Trustee Ezra B. Whitman expired June 30, 1948, and the Board complied with his request that he not be nominated for re-election. His successor was not elected, thereby leaving one vacancy on the Board.

Trustees Frank E. Gannett and Franklin W. Olin were re-elected by the Board for five-year terms beginning July 1, 1948.

Trustees Frank S. Columbus, Louis Hollander, and Thomas A. Murray were re-elected for one-year terms beginning July 1, 1948, as members of the Board from the field of New York State Labor.

STANDING COMMITTEES

The Trustees elected to the respective Standing Committees served for the entire academic year 1947-1948, with the following exception:

Buildings and Grounds Committee: Paul A. Schoellkopf, Vice-Chairman, died September 30, 1947. Edward E. Goodwillie was elected to fill his unexpired term, and George R. Pfann was elected Vice-Chairman.

On June 14, 1948, the Board reconstituted the membership of its Standing Committees for the year beginning July 1, 1948, as follows (re-election indicated by *):

(The Chairman of the Board and the President of the University are *ex officio* members of all committees.)

Executive Committee: Chairman, Arthur H. Dean; Vice-Chairman, Mary H. Donlon*; and the following elective members: Howard E. Babcock, Francis T. Spaulding*, Harold M. Stanley*, Harry G. Stutz*, Maxwell M. Upson*; and the following *ex officio* members: Chairmen of the other Standing Committees: Joseph P. Ripley*, John S. Parke, Larry E. Gubb*, George R. Pfann.

Investment Committee: Chairman, Joseph P. Ripley*; Vice-Chairman, Horace C. Flanigan*; and the following elective members: John L. Collyer*, Arthur H. Dean, Frank E. Gannett*, Stanton Griffis, Nicholas H. Noyes*, Walter C. Teagle*, Maxwell M. Upson*.

Buildings and Grounds Committee: Chairman, John S. Parke; Vice-Chairman, Edward E. Goodwillie; and the following elective members: Matthew Carey, Frank S. Columbus*, Ruth F. Irish*, George R. Pfann*, Maxwell M. Upson.

Planning and Development Committee: Chairman, Larry E. Gubb*; Vice-Chairman, Victor Emanuel*; and the following elective members: John L. Collyer*, Herbert Fisk Johnson*, Jacob Gould Schurman, Jr., Robert E. Treman*, J. Carlton Ward, Jr.

Law Committee: Chairman, George R. Pfann; Vice-Chairman, William D. P. Carey*; and the following elective member: Mary H. Donlon*.

SPECIAL COMMITTEES

Changes were made in the following Special Committees of the Board:

Audit Committee: The Audit Committee was reconstituted by the Board on May 1, 1948, effective for the period until January, 1949, to include Trustees William D. P. Carey, Chairman; Edward E. Goodwillie; and Willis H. Carrier.

Board Membership Committee: On June 14, 1948, Robert E. Treman was re-elected Chairman for one year beginning July 1, 1948. Horace C. Flanigan was elected a member for a five-year term beginning July 1, 1948, to succeed Joseph P. Ripley.

ADMINISTRATIVE BOARDS

Joint Administrative Board of New York Hospital—Cornell Medical College Association: President Edmund E. Day succeeded William H. Jackson as Chairman of the Joint Administrative Board of the New York Hospital—Cornell Medical College Association on January 1, 1948.

The following appointments of Trustees to the Administrative Boards of the University were made on June 14, 1948, to become effective July 1, 1948:

Board of Governors of Willard Straight Hall: Ruth F. Irish for a three-year term to succeed Harry G. Stutz and Matthew Carey to fill a vacancy for a one-year term.

Library Board: Harry G. Stutz to succeed himself for a five-year term.

Board on Physical Education and Athletics: Edward E. Goodwillie to succeed Victor Butterfield and George R. Pfann to succeed himself for one-year terms.

Board on Student Health and Hygiene: Frank E. Gannett to succeed Alice Blinn, Robert E. Treman to succeed Van C. Whittemore, and William B. Cornell to succeed himself for one-year terms.

COLLEGE COUNCILS

Council for the New York State College of Agriculture and the Agricultural Experiment Stations: Frank S. Columbus was elected a member to fill a vacancy on October 10, 1947, for the remainder of the term expiring June 30, 1948.

The following appointments of Trustees to the College Councils of the University were made on June 14, 1948, to become effective July 1, 1948:

College of Architecture Council: Victor Butterfield to succeed himself and Herbert Fisk Johnson to succeed Thomas I. S. Boak for one-year terms.

Medical College Council: Horace C. Flanigan to succeed himself for a four-year term.

Council for the New York State College of Agriculture and the Agricultural Experiment Stations: Frank E. Gannett to succeed Howard E. Babcock and Frank S. Columbus to succeed himself for one-year terms.

Council for the New York State College of Home Economics: George R. Pfann to succeed Harry G. Stutz and Ruth F. Irish to succeed herself for one-year terms.

Council for the New York State Veterinary College: Earl B. Clark to succeed Van C. Whittemore and Robert E. Treman to succeed himself for one-year terms.

Council for the New York State School of Industrial and Labor Relations: John S. Parke to succeed Howard E. Babcock, John L. Collyer, Mary H. Donlon, and Walter C. Teagle to succeed themselves, not from the field of Labor; Frank S. Columbus, Louis Hollander, and Thomas A. Murray to succeed themselves, from the field of Labor, all for one-year terms.

ROBERT B. MEIGS,
Secretary of the Board of Trustees.

APPENDIX I

REPORT OF THE REGISTRAR

To the President of the University:

SIR: I have the honor to submit herewith the annual report of the Registrar. It covers the academic year 1947-48, including the Summer Sessions of 1947 and, for convenience, work between the end of the Spring Term 1947 and July 1, 1947, but excluding work between the end of the Spring Term 1948 and July 1, 1948.

TABLE I
TERMS OF INSTRUCTION FOR THE YEAR 1947-1948

	<i>Days in Session*</i>
AT ITHACA:	
Summer Session I, 6 weeks July 1-Aug. 9	31 †
Summer Session II, 6 weeks Aug. 11-Sept. 19	30
Summer Session, Law June 30-Sept. 13	66
Summer Session, Architecture June 30-Sept. 6	60
Summer Session, Chem. E. July 1-Sept. 19	70
Fall Term Sept. 23-Feb. 4	101
Thanksgiving Recess Nov. 27-29	(subtracted)
Christmas Recess Dec. 21-Jan. 4	(subtracted)
Midyear Recess Feb. 5	(subtracted)
Spring Term Feb. 6-June 8	99
Spring Recess March 28-April 4	(subtracted)
Spring Day, a holiday May 22	(subtracted)
AT NEW YORK CITY:	
<i>Medical College</i>	
Fall Term Sept. 23-Dec. 16	69
Columbus Day, a holiday Oct. 13	(subtracted)
Thanksgiving Recess Nov. 27-30	(subtracted)
Christmas Recess Dec. 17-Jan. 1	(subtracted)
Winter Term Jan. 2-March 20	67
Washington's Birthday, a holiday Feb. 23	(subtracted)
Spring Term March 29-June 12	67
Memorial Day, a holiday May 31	(subtracted)
<i>School of Nursing</i>	
Third Term May 12-Sept. 27, 1947	117
(Memorial, Independence, and Labor Day subtracted)	
First Term Sept. 29-Jan. 18	92
(Columbus, Thanksgiving, Christmas, and New Year's Day subtracted)	
Second Term Jan. 19-May 9	94
Lincoln's and Washington's Birthdays subtracted)	
Third Term May 10-Sept. 25, 1948	117
(Memorial, Independence, and Labor Day subtracted)	

*Sundays excluded throughout.

†Saturdays also excluded, excepting Saturday, July 5.

The calendar for the academic year 1947-48 for the divisions at Ithaca is distinguished as the first complete return since the War years to the schedule which had been known as "normal" for forty years before the War. It comprised two terms with a total of 200 session days, including registration and examination days, as prescribed by the University By-Laws (Article XXXIV, Section 3).

PRESIDENT'S REPORT

As in the summer of 1946, two general University Summer Sessions (each, in 1947, of six weeks), and three specialized Summer Sessions (in the Law School of eleven weeks, in the College of Architecture of ten weeks, and in the School of Chemical Engineering of twelve weeks) gave opportunity for "acceleration" to those students (especially veterans) who wanted it.

TABLE II

ATTENDANCE FOR THE ACADEMIC YEAR 1947-1948

The cross totals for the year in Ithaca include (a) "double registrants" (i.e., students registered in two divisions of the University at the same time) and (b) students registered in one division for the Fall Term and in another for the Spring Term. The grand totals exclude all duplicate registrations.

IN ITHACA:

College	Fall Term			Spring Term			Total for Year		
	M	W	T	M	W	T	M	W	T
Agriculture.....	1,341	173	1,514	1,307	169	1,476	1,436	183	1,619
Architecture.....	179	40	219	171	36	207	188	41	229
Arts and Sciences....	1,671	763	2,434	1,600	736	2,336	1,762	789	2,551
Business and Public Administration.....	91	3	94	88	3	91	91	3	94
Engineering.....	2,445	21	2,466	2,244	17	2,261	2,626	22	2,648
Graduate School....	1,044	215	1,259	1,024	218	1,242	1,142	249	1,391
Home Economics.....	0	623	623	0	578	578	0	632	632
Hotel Administration.	330	26	356	337	21	358	387	27	414
Industrial & Labor Relations.....	249	33	282	250	35	285	280	36	316
Law.....	353	22	375	329	20	349	356	22	378
Nutrition.....	24	12	36	25	11	36	30	12	42
Veterinary Medicine..	137	6	143	134	6	140	139	6	145
Total registrations....	7,864	1,937	9,801	7,509	1,850	9,359	8,437	2,022	10,459
Less double registrants	7,815	1,930	9,745	7,466	1,843	9,309	8,386	2,015	10,401
Total enrolled (less all other duplicates).....							8,299	2,003	10,302

IN NEW YORK CITY:

	First Term		Second Term		Third Term				
	M	W	M	W	M	W			
Medical College.....	278	37	278	37	206	31	278	37	315
School of Nursing.....	...	164	...	153	...	149	...	213	213
	278	201	278	190	278	180	278	250	528

GRAND TOTALS

(Excluding duplicates)..... 8,577 2,253 10,830

TABLE III

ATTENDANCE AT SUMMER SESSIONS, 1947, ETC.

	<i>Men</i>	<i>Women</i>	<i>Total</i>
6-week Summer Session I.....	1,676	823	2,499
Graduate School (included above).....	333	165	498
6-week Summer Session II.....	241	10	251
Graduate School (included above).....	23	..	23
Unit Courses.....	190	92	282
	<hr/> 2,463	<hr/> 1,090	<hr/> 3,553
Distribution of Duplicates:			
6-week Summer Session I and Unit Courses.....	1	1	2
6-week Summer Session I and 6-week Summer Session II.....	226	9	235
Graduate School and Summer Sessions.....	356	165	521
	<hr/> 583	<hr/> 175	<hr/> 758
Total (excluding duplicates).....	1,880	915	2,795
Law Summer Session.....	169	7	176
Architecture Summer Session.....	52	4	56
Chemical Engineering Summer Session.....	21	..	21
Extramural Courses (Summer Session).....	47	1	48
Short Shop Course (College of Engineering).....	51	..	51
Summer Camp in Civil Engineering.....	92	..	92
Personal Direction (Graduate School).....	368	24	392
Personal Direction (School of Nutrition).....	4	1	5
Extramural Courses (academic year).....	218	77	295
Short Courses (Agriculture).....	281	4	285
Resident Doctor.....	1	1	2
Candidate for Degree Only.....	65	22	87

TABLE IV

MATRICULANTS, 1947-1948

	<i>Men</i>	<i>Women</i>	<i>Total</i>
Undergraduates in first year.....	1,343	369	1,712
Undergraduates with advanced standing beyond first year..	269	35	304
Graduate Students (not including Summer Session).....	382	86	468
Graduate Students (Summer Session).....	70	68	138
Business and Public Administration.....	16	2	18
Law.....	93	3	96
Medicine.....	62	6	68
Nursing.....	..	41	41
Nutrition.....	4	6	10
Veterinary Medicine.....	21	..	21
Special Students (excepting 2-yr. Agriculture).....	62	38	100
2-yr. Agriculture.....	100	..	100
	<hr/> 2,422	<hr/> 654	<hr/> 3,076

TABLE V

GEOGRAPHIC DISTRIBUTION OF STUDENTS IN ITHACA

For the academic year 1947-1948 students enrolled at Ithaca represented every state in the Union and the District of Columbia, three territories, and forty foreign countries.

<i>States</i>	<i>Total</i>
Alabama.....	19
Arizona.....	9
Arkansas.....	11
California.....	78
Colorado.....	17
Connecticut.....	232
Delaware.....	17
Florida.....	65
Georgia.....	18
Idaho.....	5
Illinois.....	189
Indiana.....	38
Iowa.....	18
Kansas.....	22
Kentucky.....	20
Louisiana.....	13
Maine.....	43
Maryland.....	136
Massachusetts.....	298
Michigan.....	84
Minnesota.....	37
Mississippi.....	10
Missouri.....	48
Montana.....	3
Nebraska.....	26
Nevada.....	1
New Hampshire.....	36
New Jersey.....	747
New Mexico.....	7
New York.....	6,351
North Carolina.....	23
North Dakota.....	5
Ohio.....	276
Oklahoma.....	11
Oregon.....	11
Pennsylvania.....	633
Rhode Island.....	35
South Carolina.....	13
South Dakota.....	4
Tennessee.....	29
Texas.....	34
Utah.....	27
Vermont.....	27
Virginia.....	60
Washington.....	17
West Virginia.....	34
Wisconsin.....	44
Wyoming.....	2
District of Columbia.....	84
TOTAL.....	9,967

REGISTRAR'S REPORT

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U. S. Territories

Hawaii.....	12
Puerto Rico.....	19
Panama Canal Zone.....	2

TOTAL	33
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Foreign Countries

Afghanistan.....	1
Argentina.....	4
Belgium.....	1
Bermuda.....	2
Brazil.....	4
Canada.....	84
China.....	52
Colombia.....	3
Costa Rica.....	4
Cuba.....	7
Denmark.....	1
Dominican Republic.....	2
Ecuador.....	6
Egypt.....	6
England.....	9
France.....	4
Greece.....	3
Holland.....	1
Iceland.....	3
India.....	50
Iran.....	1
Iraq.....	1
Italy.....	1
Jamaica, B.W.I.....	1
Mexico.....	9
Netherlands W.I.....	2
Nicaragua.....	1
Norway.....	11
Pakistan.....	1
Palestine.....	1
Panama, Republic of.....	2
Peru.....	2
Philippine Islands.....	5
Rumania.....	1
Siam.....	2
South Africa.....	1
Sweden.....	1
Turkey.....	7
Uruguay.....	2
Venezuela.....	3

TOTAL	302
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GRAND TOTAL.....	10,302
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PRESIDENT'S REPORT

TABLE VI

UNDERGRADUATE AVERAGES

In the summer of 1947 the Registrar's Office resumed the computation of undergraduate averages for the preceding academic year, a practice which had been discontinued in 1942 "for the duration." The practice had begun in 1938 at the earnest request of the National Interfraternity Conference who for some years had viewed Cornell as "backward" because of her non-cooperation in the Conference's annual nationwide study of fraternity scholarship.

Some of the general results of the study for the year 1946-1947 are here recorded without comment, as the figures speak for themselves. For comparison they are alined with the corresponding averages for the academic year 1941-1942, the last previous year for which a similar study was made. In both years undergraduates only are included.

	1941-1942	1946-1947
Independent women.....	76.73	78.10 (+1.37)
All women.....	77.19	78.00 (+0.81)
All sorority.....	77.84	77.77 (-0.07)
All undergraduates.....	75.39	76.73 (+1.34)
Independent men.....	75.82	76.56 (+0.74)
All men.....	74.80	76.36 (+1.56)
All fraternity.....	73.89	76.04 (+2.15)

Three points are noteworthy about the averages for 1946-1947:

- (1) The all-undergraduate average is higher (+1.34).
- (2) The greatest gain is by the fraternity men (+2.15).
- (3) The only loss is by the sorority women (-0.07).

The fraternity with the *lowest* average for 1946-1947 would, with the same average, have ranked about in the *middle* of the fraternity group in 1941-1942.

A study of undergraduate averages for 1946-1947 of single veterans, married veterans, and all non-veterans shows the following:

Married veterans.....	77.23
All non-veterans.....	77.22
All undergraduates.....	76.73
All veterans.....	76.38
Single veterans.....	76.18

Since women veterans constitute so small a proportion of the total veteran group —(a little more than 1% of the veterans are women)—a comparison of the all veterans' average (76.38) with the *all men's* average (76.36) might be fairer than the comparison with the *all undergraduate* average (76.73). So, too, in comparing the all veterans' average (76.38) with the *all non-veterans'* average (77.22) one must bear in mind that the non-veterans' group contains a much higher proportion of women. Nevertheless, among Cornell veterans, in this year 1946-1947, "hostages to fortune" appear to have been a stimulus to study.

TABLE VII

DEGREES

September 1947; February 1948; June 1948

	<i>Men</i>	<i>Women</i>	<i>Total</i>
A.B.	389	250	639
B.S. (a)*	194	52	246
B.S. (b)* .....	...	170	170
B.S. (c)*	81	8	89
B.S. (d)*	70	11	81
B.Arch.	22	4	26
B.C.E.	96	1	97
B.Chem.E.	51	...	51
B.E.E.	73	1	74
B.F.A.	2	4	6
B.L.A.	1	...	1
B.M.E.	126	1	127
B.S. in A.E.	68	...	68
B.S. in C.E.	13	...	13
B.S. in E.E.	18	1	19
B.S. in M.E.	54	...	54
B.S. in Nursing .....	...	74	74
D.V.M.	1	...	1
LL.B.	100	6	106
A.M.	39	40	79
LL.M.	1	...	1
M.Aero.E.	4	...	4
M.Arch.	2	...	2
M.B.A.	32	1	33
M.C.E.	9	...	9
M.Chem.E.	5	...	5
M.E.E.	5	...	5
M.Food S.	3	...	3
M.M.E.	2	...	2
M.Nutr.S.	6	2	8
M. Regional Planning	7	...	7
M.S.	74	57	131
M.S. in Agriculture	44	...	44
M.S. in Education	38	20	58
M.S. in Engineering	20	...	20
M.S. in I&LR.	7	1	8
M.D.	72	6	78
Ph.D.	137	19	156
Total.	1,866	729	2,595

*(a) means Agriculture; (b) Home Economics; (c) Hotel Administration; (d) Industrial and Labor Relations.

TABLE VIII

TABLE SHOWING BY YEARS THE NUMBER AND KINDS OF DEGREES GRANTED BY
CORNELL UNIVERSITY

	DEGREES						Total
	Before 1944	1944	1945	1946	1947	1948	
Architects.....	1	...	...	...	...	...	1
Bachelors of Arts.....	12,976	287	293	303	544	639	15,042
Bachelors of Agriculture.....	30	...	...	...	...	...	30
Bachelors of Architecture.....	789	12	12	11	21	26	871
Bachelors of Chemistry.....	823	...	...	...	...	...	823
Bachelors of Chemical Engineering.....	28	40	15	3	43	51	180
Bachelors of Civil Engineering.....	250	22	13	20	55	97	457
Bachelors of Electrical Engineering.....	55	31	24	29	25	74	238
Bachelors of Fine Arts.....	36	...	2	1	2	6	47
Bachelors of Landscape Architecture.....	82	...	...	...	...	...	83
Bachelors of Law.....	2,556	17	9	20	51	106	2,759
Bachelors of Letters.....	264	...	...	...	...	...	264
Bachelors of Literature.....	52	...	...	...	...	...	52
Bachelors of Mechanical Engineering.....	209	54	50	26	78	127	544
Bachelors of Philosophy.....	484	...	...	...	...	...	484
Bachelors of Science.....	3,712	...	...	...	...	...	3,712
Bachelors of Science (College of Agriculture)...	3,481	86	69	116	221	246	4,219
Bachelors of Science (College of Home Economics)...	1,649	129	198	160	108	170	2,414
Bachelors of Science (Hotel Administration)....	633	9	14	17	78	89	840
Bachelors of Science (Indust. & Labor Relations)...	...	...	...	...	11	81	92
Bachelors of Science in Admin. Engineering....	510	37	16	11	24	68	666
Bachelors of Science in Agriculture.....	357	...	...	...	...	...	357
Bachelors of Science in Architecture.....	123	...	...	...	...	...	123
Bachelors of Science in Chemical Engineering..	6	32	25	3	...	...	66
Bachelors of Science in Chemistry.....	9	...	...	...	...	...	9
Bachelors of Science in Civil Engineering.....	4	11	17	28	28	13	101
Bachelors of Science in Electrical Engineering...	1	14	21	29	30	19	114
Bachelors of Science in Mechanical Engineering	5	46	65	67	72	54	309
Bachelors of Science in Natural History.....	4	...	...	...	...	...	4
Bachelors of Science in Nursing.....	10	19	19	16	54	74	192
Bachelors of the Science of Agriculture.....	127	...	...	...	...	...	127
Bachelors of Veterinary Science.....	4	...	...	...	...	...	4
Chemical Engineers.....	91	...	...	...	...	...	91
Civil Engineers.....	3,066	...	...	1	...	...	3,067
Electrical Engineers.....	813	...	...	...	...	...	813
Forest Engineers.....	17	...	...	...	...	...	17
Graduates in Pharmacy.....	1	...	...	...	...	...	1
Mechanical Engineers.....	6,282	...	...	...	...	...	6,282
Pharmaceutical Chemists.....	2	...	...	...	...	...	2
Masters in Architecture.....	46	...	...	...	...	2	48
Masters in Forestry.....	86	...	...	...	...	...	86
Masters of Aeronautical Engineering.....	...	...	...	...	...	4	4
Masters of Arts.....	2,063	33	36	50	51	79	2,312
Masters of Arts in Education.....	84	...	...	...	...	...	84
Masters of Business Administration.....	...	...	...	...	33	...	33
Masters of Chemical Engineering.....	7	1	...	...	3	5	16
Masters of Chemistry.....	23	...	...	...	...	...	23
Masters of Civil Engineering.....	305	2	2	6	10	9	334
Masters of Education.....	1	2	...	1	...	...	4
Masters of Electrical Engineering.....	55	...	...	2	1	5	63
Masters of Fine Arts.....	8	...	...	1	1	...	10
Masters of Food Science.....	...	...	...	...	1	3	4
Masters of Landscape Architecture.....	8	...	...	...	...	...	8
Masters of Landscape Design.....	21	...	...	...	...	...	21
Masters of Law.....	66	...	...	3	1	1	71
Masters of Letters.....	9	...	...	...	...	...	9
Masters of Nutritional Science.....	...	...	...	...	...	8	8
Masters of Mechanical Engineering.....	280	2	3	4	5	2	296
Masters of Regional Planning.....	1	1	1	1	3	7	14
Masters of Philosophy.....	10	...	...	...	...	...	10
Masters of Science.....	1,472	41	53	70	102	131	1,869
Masters of Science in Agriculture.....	470	10	3	19	28	44	574
Masters of Science in Architecture.....	19	...	...	...	...	...	19
Masters of Science in Education.....	260	14	8	22	46	58	408
Masters of Science in Engineering.....	113	12	13	24	19	20	201
Masters of Science in Indust. & Labor Relations	...	...	...	1	1	8	10
Masters of Veterinary Medicine.....	1	...	...	...	...	...	1
Doctors of Law (Honorary).....	2	...	...	...	...	...	2
Doctors of Medicine.....	2,422	75	156*	80	83	78	2,894
Doctors of Philosophy.....	3,194	95	81	76	95	156	3,697
Doctors of Science.....	20	...	...	...	...	...	20
Doctors of the Science of Law.....	8	...	...	...	1	...	9
Doctors of Veterinary Medicine.....	1,213	79	32	67	35	1	1,427
Total Degrees.....	51,809	1,213	1,250*	1,288	1,931	2,595	60,086

*Including 79 degrees in Medicine reported after Table VI for 1944-1945 was made up.

REGISTRAR'S REPORT

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TABLE IX

TABLE SHOWING THE NUMBER OF STUDENTS IN EACH COURSE IN THE PAST FIVE YEARS

	1943-44	1944-45	1945-46	1946-47	1947-48
Agriculture.....	460	552	1,127	1,660	1,619
Architecture.....	67	86	162	208	229
Arts and Sciences.....	1,355	1,552	2,075	2,522	2,551
Business and Public Administration.....	...	...	...	41	94
Engineering.....	821	661	1,556	2,667	2,648
Graduates.....	612	625	1,050	1,217	1,391
Home Economics.....	649	684	640	640	632
Hotel Administration.....	70	105	287	417	414
Industrial and Labor Relations.....	...	...	173	277	316
Law.....	49	53	229	355	378
Medicine.....	42	68	327	322	315
Nursing School.....	320	364	270	233	213
Nutrition.....	...	...	...	20	42
Veterinary Medicine.....	41	148	154	133	145
Total, excluding Duplicates.....	4,320	4,783	7,928	10,560	10,830
Architecture Summer Session.....	...	...	...	47	56
Candidate for Degree Only.....	...	...	...	...	87
Chemical Engineering Summer Session.....	...	...	...	...	21
Curtiss-Wright Course.....	104	...	...	...	...
Engineering, Science, and Management War Training Program.....	6,171	2,999	...	...	...
Extramural Courses.....	65	49	218	150	295
Extramural Courses, Summer.....	...	...	...	...	48
Graduate Courses, Summer.....	138	159	197	617	521
Law Summer Session.....	...	...	...	205	176
Personal Direction, Graduate School.....	...	...	...	...	392
Personal Direction, School of Nutrition.....	...	...	...	...	5
Short Courses, Agriculture.....	...	...	...	...	285
Short Shop Course, College of Engineering.....	...	...	...	...	51
Summer Camp in Civil Engineering.....	...	...	...	...	92
Summer Session.....	460	868	1,093	2,541	2,793
Unit Courses.....	...	...	138	250	282
Student Officers, Diesel Engineering.....	570	677	48	...	...
Student Officers, Steam Engineering.....	264	300	26	...	...

PRESIDENT'S REPORT

TABLE X

AGE AT GRADUATION

The age of Cornell students at graduation has been recorded at ten-year periods from 1870 to 1900 and at five-year periods since 1900. For the sake of brevity, the ages for only the two latest periods have been printed annually since 1940.

	Class of 1940			Class of 1945		
	Minimum	Median	Maximum	Minimum	Median	Maximum
Agriculture						
Men.....	20-1	22-9	40-3	20-1	22-10	29-10
Women.....	19-10	21-8	31-2	20-0	21-10	40-4
Architecture						
Men.....	21-6	24-4	28-1	19-6	21-7	30-9
Women.....	21-4	23-5	24-9	19-11	22-6	23-9
Arts						
Men.....	19-2	21-10	33-3	18-11	21-	35-8
Women.....	19-11	21-6	36-3	19-1	21-	37-1
Engineering						
Men.....	20-2	22-5	48-9	19-	20-10	31-3
Women.....	25-8	25-8	25-8	20-4	20-11	21-5
Home Economics						
Men.....	20-	22-11	27-2	20-9	22-	22-5
Women.....	19-7	22-	37-	19-	21-	26-2
Veterinary						
Men.....	20-6	24-	29-6	21-2	22-6	28-11
Women.....	21-7	22-6	25-1	24-9	24-9	24-9
Masters						
Men.....	21-1	27-9	55-10	19-11	27-1	66-2
Women.....	21-6	27-7	50-6	20-5	26-10	63-3
Doctors of Philosophy						
Men.....	23-2	29-6	49-5	22-7	29-5	56-11
Women.....	24-9	34-11	45-8	28-8	38-	45-9
Law						
Men.....	21-11	24-4	29-2	23-2	24-7	26-2
Women.....	24-	25-2	26-7	21-5	23-4	30-8
Medicine						
Men.....	22-11	25-10	30-1	22-9	24-7	31-10
Women.....	24-3	26-3	33-5	23-1	24-10	26-10
Nursing						
Women.....				20-6	22-11	31-2

CURRENT AGE-DISTRIBUTION

FOR MEN

Because of the possible effects on the student population of the imminent military draft, a survey was made as of January 1, 1948 of the age-distribution of 7,242 male students in the schools and colleges at Ithaca. The results have enough contemporary interest and enough possible value for the future to warrant printing. Beside them are placed the results of a similar survey made for similar reasons as of October 1, 1940. In 1948 the students 18 and under made up only 13.2% of the total, but in 1940 students 18 and under were 24% of the whole. In 1948 those in the susceptible years 19 through 25 made up 67.9% of the total males, which corresponds closely to the 68.6% in the same range of ages in 1940. At most, however, only 18.8% of the total male students would have been eligible for the draft as of January 1, 1948 because the others in the age-group 19 through 25 were veterans.

Age	Non-Veterans		Jan. 1, 1948 Veterans		Total %*		Oct. 1, 1940 Total %†	
	No.	%*	No.	%*				
Under 18.....	230	3.2	5	0.1	235	3.3	474	8.6
18.....	711	9.8	9	0.1	720	9.9	854	15.4
19.....	641	8.9	56	0.8	697	9.7	982	17.7
20.....	236	3.3	368	5.1	604	8.4	892	16.1
21.....	129	1.8	721	10.0	850	11.8	705	12.7
22.....	105	1.4	690	9.5	795	10.9	493	8.9
23.....	103	1.4	715	9.9	818	11.3	299	5.4
24.....	82	1.1	590	8.2	672	9.3	252	4.6
25.....	62	0.9	405	5.6	467	6.5	167	3.2
26.....	73	1.0	306	4.2	379	5.2	96	1.7
27.....	56	0.8	215	3.0	271	3.8	76	1.4
28.....	34	0.5	144	2.0	178	2.5	50	0.9
29.....	38	0.5	126	1.7	164	2.2	49	0.9
30.....	24	0.3	70	1.0	94	1.3	27	0.5
31.....	16	0.2	50	0.7	66	0.9	24	0.4
32.....	19	0.3	36	0.5	55	0.8	19	0.3
33.....	22	0.3	23	0.3	45	0.6	8	0.1
34.....	17	0.2	18	0.2	35	0.4	12	0.2
35.....	8	0.1	13	0.2	21	0.3	6	0.1
Over 35.....	48	0.7	28	0.4	76	1.1	59	1.1
Total.....	2,654		4,588		7,242		5,544	
Median age.....	18 yrs. 7 mos.		23 yrs. 7 mos.		22 yrs. 8 mos.		20 yrs. 6 mos.	

*The percentages given are percentages of the total 7,242.

†The percentages given are percentages of the total 5,544.

TABLE XI

THE ISSUE OF TRANSCRIPTS

The following is reported only as evidence of the increase of business for the Registrar's Office since the beginning of the war. Only photostatic transcripts of student and alumni records have been counted; numerous miscellaneous photostats made for students and for various offices in the University are not included.

The months July–December 1941 represent about what was to be expected before the war began. Immediately after Pearl Harbor the demand for transcripts of records suddenly mounted; three years later it had fallen again, but not to the pre-war level; the next year, with the return of veterans, it rose to its highest peak; and now, in the year just past, though still more than double the demand in 1941–1942, it shows some signs of diminishing again.

	1941–42	1942–43	1943–44	1944–45	1945–46	1946–47	1947–48
July.....	358	1,191	1,056	1,670	1,224	3,227	2,416
August.....	500	1,178	1,308	1,602	2,251	2,963	1,391
September.....	483	1,041	802	1,213	1,440	2,298	1,067
October.....	430	1,111	554	1,031	1,589	1,397	1,467
November.....	325	610	1,105	754	1,972	1,595	1,158
December.....	290	602	1,144	499	2,148	1,690	1,133
January.....	1,000	747	862	466	2,606	1,808	1,125
February.....	867	2,219	877	563	1,641	1,201	1,864
March.....	1,073	2,145	2,292	788	2,358	2,221	1,988
April.....	781	1,210	964	1,365	2,873	794	1,477
May.....	789	913	575	687	2,576	1,138	912
June.....	1,079	2,497	702	664	2,130	764	1,169
Total.....	7,975	15,464	12,241	11,302	24,808	21,096	17,167

E. F. BRADFORD,
Registrar.

APPENDIX II

REPORT OF THE DEAN OF THE UNIVERSITY FACULTY

To the President of the University:

SIR: I have the honor to present the report of the University Faculty for 1947-1948.

There were included in the Faculty membership during part or all of the year 1138 persons whose rank and place of service are shown in the following table. Under the heading, "Administration," are listed only those officers who do not have academic titles in addition to their administrative designations.

	<i>Professors Emeritus</i>	<i>Pro- fessors</i>	<i>Assoc. Professors</i>	<i>Asst. Professors</i>	<i>Adminis- tration</i>	<i>Total</i>
<i>Residence</i>						
Ithaca.....	80	310	210	216	18	842
Geneva.....	5	24	23	13	..	65
New York City.....	10	35	50	130	..	225
Long Island.....	1	..	4	1	..	6
Elsewhere.....	8	..	..	..	..	...
Total.....	104	369	287	360	18	1,138

Seventeen members of the Faculty died during the year: Francis Joseph Seery, Professor of Hydraulic Engineering, Emeritus, on July 26, 1947; Leonard Alexander Lawrence, Associate Professor of Surveying, on August 11, 1947; Frank Oakes Ellenwood, Professor of Heat-Power Engineering, on September 7, 1947; Jacob Roland Collins, Professor of Physics, on September 16, 1947; Henry Neeley Ogden, Professor of Sanitary Engineering, Emeritus, on September 29, 1947; Rollins Adams Emerson, Professor of Plant Breeding, Emeritus on September 29, 1947; Clarence Cheney, Professor of Clinical Psychiatry, on November 14, 1947; Vladimir Karapetoff, Professor of Electrical Engineering, Emeritus, on January 11, 1948; William Lindsay Malcolm, Professor of Civil Engineering and Director of the School of Civil Engineering, on January 18, 1948; Charles Ernest Hayden, Professor of Veterinary Physiology, on January 25, 1948; Alfred Franklin Hocker, Assistant Professor of Radiology, on February 12, 1948; Samuel Willard Harman, Associate Professor of Entomology, on March 16, 1948; Edwin John Doty, Associate Professor of Psychiatry, on March 19, 1948; Edwin Woodworth Hamlin, Professor of Electrical Engineering, on April 27, 1948; Henricus J. Stander, Professor of Obstetrics and Gynecology, on May 2, 1948; Francis Robert Sharpe, Professor of Mathematics, Emeritus, on May 18, 1948; and Ernest George Merritt, Professor of Physics, Emeritus, on June 5, 1948.

Eleven members of the Faculty retired from active service during the year and were elected emeritus professors: Robert Stanley Breed, Professor of Bacteriology, (November 1, 1947); Edmund Louis Worthen, Professor of Soil Technology, (January 1, 1948); Harold Joseph Conn, Professor of Bacteriology, (May 1, 1948); Walter Buckingham Carver, Professor of Mathematics, (July 1, 1948); Axel Ferdinand Gustafson, Professor of Soil Technology, (July 1, 1948); Edward Sewell Guthrie, Professor of Dairy Industry, (July 1, 1948); Herbert David Laube, Professor of Law, (July 1, 1948); George Holland Sabine, Professor of Philosophy, (July 1, 1948); Herbert Henry Scofield, Professor of Civil Engineering, (July 1, 1948); Charles Arthur Taylor, Professor in Extension Service, (July 1, 1948); and Oscar Diedrich von Engeln, Professor of Geology, (July 1, 1948).

During the year forty-seven members left the ranks of the Faculty either by resignation or because of termination of the contract period. Sixty-seven members were on sabbatic leave during the year and seven were on special leaves.

ELECTIONS

The Faculty elected H. D. Laube to succeed F. A. Southard, jr. as its Secretary; W. H. Farnham, M. G. Fincher, and Catherine Personius as members of the Committee on University Policy; H. C. Stephenson as a member of the Board on Physical Education and Athletics; Robert Dalton and Harold H. Williams as members of the Board on Student Health and Hygiene; and D. W. Baker, H. W. Briggs, R. F. Chamberlain, H. H. Love, and Lemo Rockwood as the Committee on Nominations for the year 1947-1948.

The Faculty also elected as members of the Committee on the Economic Status of the Faculty G. P. Adams, jr., Herrell De Graff, Hazel Hauck, A. J. Keeffe, and H. A. Wichelns. The Committee elected G. P. Adams, jr., to serve as its Chairman. This Special Committee was authorized by the Faculty to serve for a three-year period. It has made a detailed study of the faculty salary scale and, through conferences with a similar Committee of the Board of Trustees appointed for the purpose, has brought the results of the study to the attention of the Board. This Committee is proposing to undertake a survey of the retirement policies of the various universities and to continue its study of the salary scale at Cornell.

DEAN OF STUDENTS

When the office of Dean of Students was authorized, the University Faculty enacted legislation specifying the relationship between the Dean of Students and those committees of the University Faculty which have to do with student affairs. The general plan of procedure thus initiated has worked well despite the fact that for the last two years the office of Dean of Students has been vacant. During this time the Counselor of Students (Men) and the Counselor of Students (Women) have cooperated with the various committees by playing the role assigned in the legislation to the Dean of Students.

On the recommendation of the University Faculty, the Board of Trustees has now abolished the office of Dean of Students and replaced it by two offices, Dean of Men, and Dean of Women. The University Faculty has revised its legislation so as to legalize the relationship which has developed between the Counselors and the University Faculty committees and to specify it in terms of the new offices, Dean of Men, and Dean of Women.

TERMS OF APPOINTMENT

The recommendations submitted by the University Faculty to the Board of Trustees in June 1947 regarding maximum periods of service of instructors and assistant professors have continued to be the subject of discussion. Amendments to the proposal were made alternately by the Faculty and by the Board, and in January the Board of Trustees enacted the legislation in a form which was satisfactory to both parties.

In this legislation a distinction is made between an instructor and a faculty instructor. The former may register as a candidate for a degree and has not the right to vote in meetings of the faculty of his college. The latter may not be a candidate for a Cornell degree and may be a voting member of his college faculty. The maximum term of service of an instructor or a faculty instructor is five years and that of an assistant professor is two periods of three years each except in certain special cases which are specified.

SABBATIC LEAVES

In the past the time which some members of the Faculty could devote to scholarly pursuits has been seriously curtailed by the extra load which they have assumed in order to permit colleagues to take sabbatic leaves. This resulted from the requirement that arrangements be made for continuing the work of instruction of a member of the Faculty during the sabbatic leave without aggregate expense to the University. This provision has also operated to make it difficult for certain members of the Faculty to take sabbatic leaves inasmuch as circumstances did not permit them to arrange for the continuance of their courses.

The Faculty has recommended and the Board of Trustees has adopted an amended form of the legislation regarding sabbatic leaves in which it is provided that the responsibilities within each department shall be distributed so as to permit every professor, associate professor, or assistant professor to take his sabbatic leave when it comes due without overburdening the other members of the department. This puts the responsibility for making the arrangements upon the department rather than upon an individual professor. The new legislation will greatly increase the value to the University of the provision for sabbatic leaves and it will insure its more uniform realization among the various colleges and departments. It is believed that the values achieved in the new legislation will amply justify the additional cost to the University and the additional responsibility that is placed upon the heads of departments.

THE INTERRUPTION OF CLASS SCHEDULES

The increase in the number of students enrolled in the University has made necessary a much more complicated class schedule which involves many multiple-section courses. Any interruption of this schedule causes a loss in efficiency of instruction quite out of proportion to the length of time involved. In order to call attention to this fact, the Faculty has made a request that such interruptions be allowed only in cases of emergency. A very serious and wholly unauthorized interruption is brought about by the large number of absences before and after vacation periods. It is difficult for a teacher to conduct a class at which there is present only a small minority of the enrolled students and not be influenced by that fact in his presentation. The result is a partial interruption of the work of the course. To meet this situation, the Faculty has revised its legislation. In doing so, it has specified the responsibility of the member of the Faculty instead of specifying a penalty to be imposed upon the student. The penalization of a student for absences is properly the function of the faculty of his college. Legislation of this sort was enacted several years ago by the University Faculty but at the request of the Student Council.

The new legislation provides that a member of the Faculty may modify his class schedule just before or just after a vacation period by obtaining the consent of the dean of his college. Previously, he was required to obtain the consent of his college faculty. It further provides that it is the responsibility of each member of the instructing staff to insure that the quality and content of instruction given in each class during the periods just before and just after a University vacation shall conform to the same standard which is maintained at any other meeting of the class.

UNIVERSITY ARCHIVIST

Acting upon the recommendation of the Committee on University Policy, the University Faculty has recommended the appointment of an Archivist whose duties it would be to collect material on Cornell history from all possible sources. His appointment would not preclude the later appointment of a Cornell Historian. It is foreseen that a centennial history of Cornell may well be prepared in 1968. The Archivist may regard his collections as groundwork for such a history. It is hoped that there may be affirmative action upon this recommendation soon, as any delay means the irrevocable loss of material.

UNIVERSITY FACULTY COMMITTEES

Several years ago the Committee on Student Affairs was reorganized into two Committees, the Committee on Student Activities, and the Committee on Student Conduct, without any detailed specification of the division of responsibility between them. As a result there has been uncertainty as to jurisdiction, and important matters, which were obviously the business of one or the other of these Committees, have received the attention of neither. A joint meeting of these Committees has been held at which the field of their joint responsibility has been explored. The Committees have agreed upon the division of responsibility and are planning to hold joint meetings in the future as seems desirable.

The Committee on Student Activities has continued to cooperate with the Student Council and with the University Counselors' office with respect to recognition of student organizations. Such recognition is accorded only after recom-

mendation by a committee of the Student Council. The Committee has been much concerned by the increasing difficulty of enforcing the University Faculty's rules regarding probation. To this end the Committee required the officers of recognized student organizations to file membership lists in the office of the Counselors of Students. This action was interpreted by a few student organizations as a potential threat to their membership. The action was protested on the floor of the Faculty and the Faculty failed to approve the action of the Committee. The Committee on Student Activities is, at present, requesting the filing of such membership lists, and most of the student organizations on the campus are complying with the request.

Another matter which is of concern to the Committee on Student Activities is the use of the name, Cornell, by student organizations in situations which sometimes bring the good name of the University into jeopardy. There has been action by the Board of Trustees regarding the use of the name and a subcommittee is now studying the problem of the formulation of a definite policy for the Committee.

The Committee on Student Conduct has considered twenty cases in the course of the academic year. The penalties imposed were: Expulsion 1, Indefinite Suspension 2, Parole 5, Reprimand 8, No Action 4. The Committee has continued its policy with regard to the penalty of parole and is well pleased with the results of this policy. In several cases the response of students to their parole officers has been most gratifying.

The Committee on Entrance Credentials and Relations with Secondary Schools has been faced with the problem of evaluating the New York State High School Equivalency Testing Program with respect to the acceptability of diplomas for admission to Cornell. There are two such diplomas, one granted on the basis of acceptable scores on the General Educational Development Test plus regents examination credit in English, American History and World Backgrounds, and a major field or the equivalent thereof; the other granted on the basis of acceptable scores on the General Educational Development Test. The Committee has approved the former but not the latter. Upon the recommendation of this Committee, the Faculty has approved a change in the method of granting entrance credit for foreign languages.

The Committee on Undergraduate Scholarships has under consideration a recommendation made by a special committee which has been making a campus-wide survey of scholarships. It is proposed to modify the method of awarding the Undergraduate Scholarships and the Le Fevre Scholarships with a view of attracting to the University more students of high qualifications by making use of an application blank which will be the same for these Scholarships as for the National and McMullen Scholarships. It has been further proposed to increase the amount of University scholarships and to decrease the number. The Committee approves these proposals provided that the funds available for University scholarships are increased so as not to reduce unduly the number of scholarships available.

The Committee on Scheduling of Public Events was reorganized last year and empowered to veto at its discretion events sponsored by student organizations in which students were not themselves the performers. During the year the Committee has been concerned with several problems of this sort and has made a good start toward the development of precedents.

The Committee on University Lectures has sponsored during the year eleven lectures financed by the Goldwin Smith Foundation and ten lectures by the Schiff Foundation. It has approved as University Lectures a series arranged by the School of Industrial and Labor Relations on a grant by Mr. E. L. Bernays; a series by Erich von Kahler on "The Crisis of the Individual" sponsored by the Department of German; a lecture on Ghandi by W. S. Nelson sponsored by the Cornell Hindustan Association; and a lecture on "Coral Reefs of Bikini" by J. W. Wells sponsored by Sigma Gamma Epsilon. During the year four series of Messenger Lectures were given, six lectures on "Psychiatry Today: Its Scope and Practice" by William Menninger and John Romano; six lectures on "The Theory of American Literature" by Howard M. Jones; six lectures on "The 'Sublime' in External Nature: Studies in the History of Literature and Science" by Marjorie Nicolson; and three lectures on "Key Issues in Housing and Community Planning" by Catherine Bauer.

The Committee on Music sponsored three series of concerts. The Bailey Hall Concert Series consisted of seven recitals: Mack Harrell, baritone; Emanuel Vardi, violist; Alexander Brailowsky, pianist; Bidu Sayao, soprano; and the Buffalo, Cleveland, and Rochester symphony orchestras. To accommodate applicants who could not secure tickets to that series, and to satisfy the growing demand for chamber music, the Committee arranged two series of three concerts each in Willard Straight Theatre. The series included the Stuyvesant, Walden, and Pascal string quartets and the Busch String Quartet with Rudolf Serkin, pianist.

CARLETON C. MURDOCK,
Dean of University Faculty.

APPENDIX III

REPORT OF THE DEAN OF THE GRADUATE SCHOOL

To the President of the University:

SIR: I have the honor to present the report of the Graduate School for the year 1947-1948.

I

Applications for admission to the Graduate School during the year outnumbered the places available in the allotment on graduate students in the ratio of approximately three to one. Of those refused admission, some were not qualified for work at the graduate level but most were well qualified and would doubtless have been admitted if the enrollment had been unlimited. Limitation of enrollment is necessary, however, if adequate standards of graduate instruction are to be maintained; such standards cannot be maintained in mass instruction.

If the number of undergraduate students is to remain as at present established, the allotments of graduate students now assigned to the various fields of concentration represent about the maximum number the University can accommodate with its present staff and facilities. In some fields the standards of instruction are threatened because of an excessive ratio of students to professors, while in others the same unfortunate situation obtains because of the improper distribution of students among the professors in the field. Consideration needs to be given to the question concerning the number of graduate students any one professor can effectively supervise, and steps need to be taken to guard against increasing the number in any instance beyond a reasonable maximum. Doubtless, this maximum cannot be determined by rule but must be determined *ad hoc*; it seems a reasonable guess, however, that a total of more than ten to fifteen students (including both majors and minors) would be found to be unmanageable by any professor without detriment to his standards, unless he is free from responsibility for undergraduate instruction. In any event, no professor should be under pressure to accept responsibility for a number of graduate students beyond that which he can most effectively serve; on the contrary, each professor should feel morally free (as, under the rules of the Graduate School, he is legally free) to decline service on Special Committees of graduate students at his discretion. If the personal touch between professor and student is lost to the educational process, the resulting instruction can be said to be instruction at the graduate level in name only.

But with limitation of enrollment many properly qualified applicants for admission to the Graduate School must be turned away, and the question remains whether the University could do more than it is now doing to meet this unfortunate situation. The only way it can do so is to establish the policy of increasing the enrollment of graduate students at the expense of the enrollment of undergraduates. And it is not irrelevant to observe that just now is an opportune time to consider such a policy: if the new institution authorized by the State of New York were initially so organized as to provide instruction at the freshman and sophomore levels in strategic centers over the state and thus relieve pressure on the established institutions for such instruction, those institutions which are equipped for graduate work would then be free to devote more of their time and resources to instruction at the higher levels without endangering standards or neglecting legitimate demands for instruction at the lower levels. The implementation of such a policy at Cornell would be expensive, of course, and would also involve some modification of the character of the institution. But the prior question is whether or not the policy is sound educationally and whether or not Cornell can meet its obligation to the educational enterprise short of this commitment.

II

A by-product of the policy above suggested would be a decrease in the demand for graduate assistants. And this would, on the whole, be unfortunate for the Graduate School. Because of the present heavy enrollment of undergraduates, especially

in the freshman and sophomore years, the demand for assistance is so great that, in some departments, only applicants who are willing to serve as assistants are even considered for admission while, in all departments, a large proportion of those admitted serve in this capacity. The unfortunate result of this is that full-time graduate students in the University are the exception rather than, as they should be, the rule; the Graduate School is primarily a market for cheap labor rather than, as it should be, an organization of scholars whose main business is research. Thus the quality of graduate work is placed in peril; however beneficial to a graduate student assisting with the laboratory and paper exercises of undergraduates may be, it can hardly compensate him for his loss of opportunity to pursue his studies without periodic interruption by alien routine assignments. And the best graduate students realize this; practically all who can make their way financially without such interruption of their main business prefer to do so, and we have lost some to other institutions in which the opportunity to do so is offered.

Just here, however, is the rub. Many of the best graduate students are not financially able to pursue such an independent course, even if they were otherwise at liberty to do so. But the answer to this problem is not far to seek: it lies in making available to them fellowships and scholarships with stipends sufficiently large at least to meet their minimum financial needs. Compared with other leading institutions, Cornell is desperately poor in this respect; our scholarly awards are relatively few, and the few we have to offer are as a rule stingy. It is true that the Board of Trustees has recently done something to meet this situation by including free tuition in each of the permanently endowed scholarships and fellowships available. But much remains to be done, if Cornell is to be placed in position to compete with other institutions for the best graduate students. And this is particularly pressing for the fields of research within the endowed colleges since the increase of tuition recently authorized by the Board. I venture to suggest that here is an opportunity for the Greater Cornell Committee to serve the University most effectively at the very center of its educational activity.

During the year the following important actions were taken by the Board of Trustees on recommendation of the Faculty of the Graduate School:

1. The degree of Master of Science in Engineering was discontinued, effective with the beginning of the year 1948-1949.
2. The term of appointment of the Dean of the Graduate School was increased from three to five years, with provision for reappointment.
3. Tuition in the Graduate School for all students with major concentration in the endowed colleges of the University was increased from \$150 to \$225.

An exchange fellowship with the University of Glasgow was established for the academic year 1948-1949. Incumbents have been appointed as follows:

From Cornell, Mr. Herbert Hillman, candidate for the Ph.D. degree with major concentration in zoology.

From Glasgow, Mr. William W. Fletcher, candidate for the Ph.D. degree with major concentration in botany.

III

New members of the General Committee of the Graduate School were elected during the year as follows:

Professor S. S. Atwood to succeed Professor P. A. Readio as representative of Group D.

Professor H. A. Wichelns to succeed Professor James Hutton as representative of Group A.

Professor C. O. Mackey to succeed Professor E. M. Strong as representative of Group E.

Professor A. L. Winsor to succeed Professor P. J. Kruse as representative of Group I.

Professor H. H. Dukes to succeed Professor G. W. Salisbury as representative at large.

Professor Damon Boynton to succeed Professor Carl Stephenson as representative at large.

The Committee is now composed of the following members, with periods of service as indicated:

Professor Damon Boynton, at large, 1951.
 Professor C. M. McCay, at large, 1949.
 Professor H. H. Dukes, at large, 1950.
 Professor L. S. Cottrell, at large, 1950.
 Professor H. A. Wichelns, Group A, 1951.
 Professor F. A. Southard, Jr., Group B, 1950.
 Professor L. P. Smith, Group C, 1950.
 Professor S. S. Atwood, Group D, 1949.
 Professor C. O. Mackey, Group E, 1951.
 Professor C. V. Morrill, Group F, 1949.
 Professor H. C. Thompson, Group G, 1949.
 Professor B. F. Willcox, Group H, 1950.
 Professor A. L. Winsor, Group I, 1951.
 Professor J. W. McConnell, Group J, 1949.
 The Secretary of the Faculty, O. F. Curtis, *ex officio*.
 The Dean of the Graduate School, Chairman *ex officio*.

IV

The usual statistical summaries are appended.

G. WATTS CUNNINGHAM,
 Dean of the Graduate School.

TABLE I

STATISTICS OF ATTENDANCE OF GRADUATE STUDENTS
 A. TOTAL ENROLLMENT

	1947-48	1946-47	1945-46	1944-45	1943-44
Number of students registered during the academic year.....	1,453	1,258	1,014	544	543
Number of students registered during the summer, as below.....	1,022	816	490	425	458
Summer Session.....	556	489	231	143	134
Personal Direction.....	416	277	18	53	101
Candidate for Degree Only.....	50	50	25	25	37
Summer Term.....	...	...	216	204	186

B. COMPARATIVE ENROLLMENT OF GRADUATE STUDENTS FOR FIVE-YEAR PERIODS

1917-18	1922-23	1927-28	1932-33	1937-38	1942-43	1947-48
279	540	767	1,044	955	595	1,453

C. NEW GRADUATE STUDENTS

	During Academic Year 1947-48	Summer 1947
Ph.D. degrees.....	179	21
A.M. and M.S. degrees.....	231	80
Professional Master's degrees.....	115	68
Resident Doctors.....	0	2
Non-candidates.....	18	1
Withdrawals after registration.....	13	3
Total.....	556	175

PRESIDENT'S REPORT

TABLE II

GRADUATE STUDENTS RECEIVING DEGREES CLASSIFIED ACCORDING TO THE
DEGREE RECEIVED

	1947-48	1946-47	1945-46	1944-45	1943-44
<i>Master's Degrees</i>					
Masters of Arts.....	79	51	50	36	33
Masters of Arts in Education.....	0	0	0	0	0
Masters of Science.....	129	88	70	53	41
Masters of Science in Agriculture.....	45	28	19	3	10
Masters of Education.....	0	0	1	0	2
Masters of Science in Education.....	53	46	22	8	14
Masters of Regional Planning.....	7	3	1	0	1
Masters of Science in Engineering.....	21	19	24	13	12
Masters of Forestry.....	0	0	0	0	0
Masters of Laws.....	1	1	3	0	0
Masters of Chemistry.....	0	0	0	0	0
Masters of Architecture.....	2	0	0	11	0
Masters of Fine Arts.....	0	1	1	0	0
Masters of Landscape Architecture.....	0	0	0	0	0
Masters of Chemical Engineering.....	5	3	0	0	1
Masters of Civil Engineering.....	8	10	6	2	2
Masters of Electrical Engineering.....	5	2	2	0	0
Masters of Mechanical Engineering.....	2	5	4	3	2
Masters of Science in Industrial and Labor Relations.....	8	1	1	0	0
Total Master's Degrees.....	365	258	204	119	118
Doctors of Philosophy.....	156	94	75	82	95
Doctors of the Science of Law.....	0	1	0	0	0
Total.....	521	353	279	201	213

TABLE III

GRADUATE STUDENTS CLASSIFIED ACCORDING TO THE DEGREES FOR WHICH THEY
ARE CANDIDATES

	<i>Academic Year</i> 1947-48	<i>Summer</i> 1947
Doctors of Philosophy.....	721	381
Doctors of the Science of Law.....	0	0
Doctors of Education.....	6	2
Master's Degrees, as below		
Masters of Arts.....	159	126
Masters of Arts in Education.....	0	0
Masters of Science.....	239	169
Masters of Science in Agriculture.....	53	61
Masters of Science in Education.....	62	170
Masters of Science in Engineering.....	52	18
Masters of Forestry.....	0	0
Masters of Laws.....	0	1
Masters of Chemistry.....	0	0
Masters of Architecture.....	7	0
Masters of Fine Arts.....	2	1
Masters of Landscape Architecture.....	0	0
Masters of Chemical Engineering.....	9	6
Masters of Civil Engineering.....	15	7
Masters of Electrical Engineering.....	20	11
Masters of Mechanical Engineering.....	16	3
Masters of Education.....	4	2
Masters of Regional Planning.....	11	5
Masters of Science in Industrial and Labor Relations...	24	5
Non-candidates, as below		
Resident Doctors.....	6	2
Non-candidates.....	28	5
Others (withdrawals, duplicates, etc.).....	19	47
Total.....	1,453	1,022

TABLE IV

GRADUATE STUDENTS CLASSIFIED ACCORDING TO THE GROUP IN WHICH THE
MAJOR SUBJECT FALLS

	1947-48	1946-47	1945-46	1944-45	1943-44
Group A, Languages and Literature.....	128	97	85	55	45
Group B, History, Philosophy, and Political Science.....	153	155	80	71	79
Group C, Physical Sciences.....	266	253	162	89	124
Group D, Biological Sciences.....	204	150	230	87	80
Group E, Engineering, Architecture.....	188	165	88	57	58
Group F, Science Departments, New York City.....	17	18	13	13	14
Group G, Agricultural Sciences.....	225	184	187	106	94
Group H, Law.....	0	1	4	2	0
Group I, Education.....	152	158	150	60	42
Group J, Industrial and Labor Relations..	42	17	0	0	0
Home Economics.....	72	54	0	0	0
Others (Resident Doctors).....	6	6	15	4	7

TABLE V

INSTITUTIONS FROM WHICH GRADUATE STUDENTS RECEIVED THEIR FIRST DEGREES

Academy of Fine Arts (Istanbul)...	1	Clarkson College.....	1
Acadia University.....	1	Clemson Agricultural College....	5
Agricultural College of Norway....	1	Colby College.....	1
Akron, University of.....	3	Colgate University.....	6
Alabama Polytechnic Institute....	5	Colorado College.....	1
Alabama, University of.....	4	Colorado State College of Agr. & Mechanics.....	5
Alberta, University of.....	8	Colorado State Teachers College..	3
Albion College.....	1	Colorado, University of.....	2
Alfred University.....	3	Columbia University.....	10
Algier's University.....	1	Connecticut State College.....	2
Allahabad, University of.....	1	Connecticut, University of.....	6
Allegheny College.....	2	Cooper Union.....	1
American University.....	1	Cornell University.....	295
Amherst College.....	2	Dacca, University of (India).....	2
Amsterdam University.....	1	Dartmouth College.....	7
Andhra University (India).....	1	Davidson College.....	1
Ankara, Institute of Agriculture (Turkey).....	1	Delaware, University of.....	1
Arizona, University of.....	5	Denison University.....	1
Arkansas, University of.....	4	De Pauw University.....	1
Athens Agriculture College.....	1	Drexel Institute.....	4
Athens, University of.....	1	Duke University.....	4
Augustana College.....	1	Duluth State Teachers College....	2
Aurora College of Women.....	1	Durham University.....	1
Baldwin Wallace College.....	1	Ecuador University.....	1
Barnard College.....	2	Elizabethtown College.....	1
Bates College.....	2	Elmira College.....	2
Baylor University.....	1	Elon College.....	1
Benares Hindu University.....	3	Emory University.....	1
Bennett College.....	1	Emporia College.....	1
Bethany College.....	3	Escola Superior de Agricultura de Lauras.....	1
Birmingham-Southern College.....	1	Escola Superior de Agricultura de Saltillo.....	1
Bombay, University of.....	5	Evansville College.....	1
Brigham Young University.....	5	Fairmont State Teachers College..	1
British Columbia, University of....	5	Fitchburg State Teachers College..	1
Brooklyn College.....	14	Florida, University of.....	6
Brown University.....	7	Florida State College.....	2
Brussels University.....	1	Fordham University.....	1
Bucknell University.....	8	Fouad University (Egypt).....	2
Buena Vista College.....	1	Franklin and Marshall College....	3
Buffalo, University of.....	9	Geneva, University of.....	1
Butler University.....	1	Georgia, University of.....	4
Cairo, University of.....	4	Georgia School of Technology....	2
Calcutta, University of.....	6	Georgia State College for Women..	1
California Institute of Technology	1	Georgia State Teachers College....	1
California, University of.....	18	Gettysburg, College.....	1
Camaguey College.....	1	Ginling College.....	2
Cambridge, University of.....	1	Goucher College.....	2
Carleton College.....	2	Grinnell College.....	2
Carnegie Institute of Technology..	2	Grove City College.....	2
Case School of Applied Science....	3	Hamilton College.....	8
Catholic University.....	1	Hampden-Sidney College.....	3
Cheeloo University.....	2	Hang-Chow College.....	1
Chicago, University of.....	7	Hartwick College.....	3
China National University.....	1	Harvard University.....	13
Chulalankarana University (Siam)	2	Hastings College.....	1
Cincinnati, University of.....	3		
Clark University.....	2		

Haverford College.....	3	Middlebury College.....	3
Hawaii, University of.....	2	Minnesota, University of.....	13
Heidelberg College.....	1	Mississippi State College.....	3
Henry Lester Institute.....	1	Missouri, University of.....	10
Hiram College.....	2	Monmouth College.....	1
Hobart College.....	9	Montana State College.....	2
Hofstra College.....	1	Montreal University.....	1
Holy Cross College.....	1	Morhead Teachers College.....	1
Houghton College.....	3	Mount Allison University.....	1
Hunter College.....	7	Mount Holyoke College.....	5
Idaho, University of.....	4	Mount St. Vincent College.....	1
Illinois Institute of Technology.....	1	Mount Union College.....	1
Illinois, University of.....	23	Muhlenberg College.....	2
Indiana State Teachers College.....	5	Muskingum College.....	1
Indiana University.....	3	Nacional De Ingenieros, Lima, Peru	1
Iowa State College.....	12	Nagpur University.....	1
Iowa State Teachers College.....	2	Nanking, University of.....	4
Iowa, University of.....	6	National Central University of	
Ithaca College.....	1	Chungking.....	3
Johns Hopkins University.....	1	National Chekiang University.....	2
Kansas City, University of.....	2	National Chiao-Tung University.....	9
Kansas State College of Agr. & Ap-		National Fuh-Tan University.....	1
plied Science.....	6	National Hunan University.....	1
Kansas, University of.....	2	National Institute of Panama.....	1
Kansas Wesleyan University.....	1	National Linan University.....	1
Kentucky, University of.....	5	National North Western College.....	1
Kenyon College.....	1	National School of Agriculture,	
Lafayette College.....	1	Mexico.....	3
Laval University.....	2	National Sun-Yat-Sen University.....	2
Lebanon Valley College.....	2	National Tsing-Hua University.....	3
Leeds University.....	1	National Wu-Han University.....	1
Lehigh University.....	3	Nebraska, University of.....	14
London, University of.....	1	Nebraska Wesleyan University.....	1
Long Island University.....	2	New Hampshire, University of.....	3
Louisiana State University.....	8	New Jersey State Teachers College	
Lucknow University.....	2	at Montclair.....	2
MacMurrey College.....	1	New York, College of the City of.....	14
Madison College.....	1	New York State College of Forestry	2
Madras University.....	5	New York State College for Teach-	
Maine, University of.....	8	ers at Albany.....	18
Manhattan College.....	2	New York State College for Teach-	
Manitoba, University of.....	3	ers at Brockport.....	1
Marietta College.....	1	New York State College for Teach-	
Marquette University.....	2	ers at Buffalo.....	16
Maryland, University of.....	10	New York State College for Teach-	
Massachusetts Institute of Tech-		ers at Cortland.....	3
nology.....	5	New York State College for Teach-	
Massachusetts State College.....	12	ers at Oswego.....	6
Massachusetts State Teachers Col-		New York, University of.....	7
lege at Framingham.....	2	North Carolina State College.....	5
Massachusetts, University of.....	2	North Carolina, University of.....	3
McGill University.....	8	North Dakota State College.....	2
McMaster University.....	1	North Dakota, University of.....	1
Memphis State College.....	1	North Texas State Teachers College	1
Mercer University.....	1	Northeast Missouri State Teachers	
Miami University.....	2	College.....	1
Michigan College of Mining &		Northeastern University.....	1
Technology.....	1	Northwest Nazarene College.....	1
Michigan State College.....	6	Northwestern University.....	2
Michigan State Normal College.....	1	Notre Dame College.....	2
Michigan, University of.....	7	Notre Dame, University of.....	2

Oberlin College.....	14	St. Benedict's College.....	1
Ohio State University.....	10	St. Bernard's Seminary.....	3
Ohio University.....	3	St. Bonaventure College.....	1
Oklahoma, Agriculture and Mechanical College.....	7	St. John's University.....	1
Oklahoma, University of.....	1	St. Lawrence University.....	5
Ontario Agricultural College.....	11	St. Louis University.....	1
Oregon State College.....	3	St. Mary-of-the-Wood College.....	1
Osmania University.....	1	St. Vincent College.....	1
Paris Institute National Agronomique.....	1	San Francisco State College.....	1
Paris, University of.....	1	San Jose State College.....	2
Pennsylvania State College.....	13	Saskatchewan, University of.....	8
Pennsylvania State Teachers College at California.....	1	Scarritt College.....	1
Pennsylvania State Teachers College at Kutztown.....	1	Scranton University.....	1
Pennsylvania State Teachers College at Lockhaven.....	2	Seton Hill College.....	1
Pennsylvania State Teachers College at Mansfield.....	3	Shanghai, University of.....	2
Pennsylvania State Teachers College at Slippery Rock.....	4	Skidmore College.....	2
Pennsylvania State Teachers College at Westchester.....	2	Soo-Chow University.....	1
Pennsylvania University of.....	2	South Carolina State Agr. & Mech. College.....	1
Philadelphia College of Pharmacy and Science.....	2	South Carolina, University of.....	1
Philippines, University of.....	2	South Dakota State College of Agr. & Mechanical Arts.....	1
Pittsburgh, University of.....	5	South Dakota State Teachers College.....	1
Polytechnic Institute of Brooklyn..	5	South Illinois State Teachers College	1
Pomona College.....	2	South Sewanee, University of the..	1
Portland, University of.....	1	Southern California, University of	1
Potsdam State Teachers College...	1	Southern Methodist University....	1
Pratt Institute.....	1	Southwestern University.....	1
Princeton University.....	10	Smith College.....	4
Providence College.....	1	Stanford University.....	2
Puerto Rico, University of.....	9	Stetson University.....	2
Puget Sound, College of.....	1	Stevens Institute.....	1
Punjab University.....	11	Stockholm, University of.....	1
Purdue University.....	10	Swarthmore College.....	5
Queens College.....	3	Sweet Briar College.....	1
Queens University.....	5	Syracuse University.....	8
Radcliffe College.....	2	Temple University.....	1
Randolph-Macon, University of..	1	Tennessee, University of.....	5
Rangoon, University of.....	1	Texas Agricultural and Mechanical College.....	5
Reading, University of.....	1	Texas Christian University.....	1
Reed College.....	2	Texas College of Mines.....	1
Regis College.....	1	Texas Technological College.....	1
Rennes, University of.....	1	Texas, University of.....	2
Rensselaer Polytechnic Institute..	8	Toronto, University of.....	8
Rhode Island State College.....	2	Travancore, University of.....	1
Rice Institute.....	2	Tufts College.....	1
Richmond, University of.....	2	Tulane University.....	3
Roberts College (Turkey).....	4	Tuskegee Institute.....	1
Rochester, University of.....	6	Union College.....	5
Rollins College.....	1	United States Military Academy..	4
Rome, University of.....	1	United States Naval Academy....	7
Rosary College.....	1	Universidad Central, Ecuador....	1
Royal Veterinary College (London)	1	Upsala College.....	1
Rutgers University.....	11	Utah State Agricultural College... 16	
		Utah, University of.....	3
		Utopia, University of.....	2
		Vanderbilt University.....	1
		Vassar College.....	3
		Vermont, University of.....	5

Virginia Military Institute.....	1	Western Reserve University.....	3
Virginia Polytechnical Institute..	7	Westminster College	3
Virginia State Teachers College...	2	Wheaton College.....	1
Virginia, University of.....	5	Wiley College.....	1
Wabash College.....	2	William & Mary College.....	1
Wagner College.....	1	William Smith College.....	2
Washington and Jefferson University	2	Williams College.....	3
Washington and Lee University...	1	Wilmington University.....	1
Washington State College.....	5	Wilson College.....	2
Washington, University of.....	6	Winthrop College.....	3
Wayne University.....	4	Wisconsin, University of.....	11
Waynesburg College.....	1	Wittenberg College.....	2
Wells College.....	1	Women's Xion College.....	1
Wesleyan University.....	2	Wooster College.....	3
West China Union University...	1	Worcester Polytechnic Institute...	1
West Virginia University.....	8	Wyoming, University of.....	2
West Virginia Wesleyan University	1	Yale University.....	6
Western Kentucky State Teachers		Yen Ching University.....	1
College.....	1	Degrees not certified.....	4
Western Ontario, University of....	3		

PRESIDENT'S REPORT

TABLE VI

GEOGRAPHICAL DISTRIBUTION OF GRADUATE STUDENTS

Alabama.....	11	Vermont.....	7
Arizona.....	3	Virginia.....	23
Arkansas.....	5	Washington.....	6
California.....	31	West Virginia.....	9
Colorado.....	9	Wisconsin.....	7
Connecticut.....	14	Wyoming.....	2
Delaware.....	2	<i>United States Possessions</i>	
District of Columbia.....	6	Hawaii.....	3
Florida.....	11	Puerto Rico.....	10
Georgia.....	11		
Idaho.....	4		
Illinois.....	26	TOTAL.....	1,252
Indiana.....	12	Belgium.....	1
Iowa.....	9	Brazil.....	2
Kansas.....	10	British West Indies.....	1
Kentucky.....	11	Burma.....	1
Louisiana.....	8	Canada.....	64
Maine.....	13	China.....	45
Maryland.....	17	Costa Rica.....	2
Massachusetts.....	36	Cuba.....	1
Michigan.....	9	Ecuador.....	2
Minnesota.....	16	Egypt.....	6
Mississippi.....	3	England.....	7
Missouri.....	18	France.....	3
Montana.....	2	Greece.....	2
Nebraska.....	11	Iceland.....	2
New Hampshire.....	7	India.....	40
New Jersey.....	45	Iran.....	1
New York.....	631	Mexico.....	4
North Carolina.....	8	Norway.....	2
North Dakota.....	2	Panama.....	2
Ohio.....	43	Peru.....	1
Oklahoma.....	3	Philippines.....	1
Oregon.....	4	Portugal.....	1
Pennsylvania.....	75	Siam.....	2
Rhode Island.....	7	Sweden.....	1
South Carolina.....	9	Turkey.....	6
South Dakota.....	2	Wales.....	1
Tennessee.....	11		
Texas.....	13	TOTAL.....	201
Utah.....	17		

APPENDIX IV

REPORT OF THE DIRECTOR OF THE UNIVERSITY LIBRARY

To the President of the University:

SIR: I have the honor to submit the annual report of the University Library for the year 1947-1948.

The University has made it possible during the past year to embark on a new and expanded library program. As is to be expected under such circumstances, the report of the year's activities is more in the nature of a chronical of things begun, than of things achieved. Nevertheless, as the pages that follow will show, there have been substantial accomplishments as well, even though in most instances what has been done is only a small fraction of what is to be done.

The libraries have been set in motion; they are moving forward; the impetus already imparted must now be stepped up and steadied and its direction controlled in order that the objectives of the program may be attained. Through constant and careful attention, through firm and increasing support, and through a broad and generous appreciation of the place of the library in the University on the part of the faculty, the administration, and the alumni and friends of the University, the program which has had its beginnings in the past year can be brought to its full development. With understanding of the problems of the library, with sympathy and counsel in its efforts to solve these problems, and with support for activities and programs once they have been undertaken, the true significance of these beginnings may be realized gradually in the years ahead. Without such understanding, assistance, and support, the beginnings will never see fruition.

SURVEY OF THE LIBRARIES

The office files in the University Library contain various letters and memoranda prepared during the past twenty years which indicate with varying degrees of clarity and definiteness the awareness of faculty members and administrative officers of the need for a careful, impartial study of the libraries of the University. Such a study was variously conceived by different individuals, but in the main it was realized that a thorough study of existing conditions was desirable as an appraisal of the progress already made and as the basis for projecting the library development of the future.

Through action of the Board of Trustees, on a recommendation of the Library Board, such a study or survey was provided for in the autumn and early winter of the past year. The Survey Committee consisted of Dr. Louis R. Wilson, Dean Emeritus, Graduate Library School, University of Chicago; Dr. Robert B. Downs, Director of Libraries and Library School, University of Illinois; and Dr. Maurice F. Tauber, Associate Professor, School of Library Service, Columbia University. The committee spent ten days in Ithaca inspecting the University's library facilities, interviewing administrative officers and members of the faculty and library staff, and collecting data on all aspects of the library situation. Special reports and statistical data were subsequently furnished the committee by the several libraries and other divisions of the University.

The findings and recommendations of the surveyors need not be recounted in detail here, since their full report was issued in February and made available to all interested members of the University. In brief, the recommendations submitted advocated a more unified library system, including, as building conditions permit, the centralization of the acquisition and processing of library materials, the development of budget and accounting procedures which will give a complete picture of the University's library expenditures, the development of a measure of uniformity in library services and regulations, a definition of what constitutes the libraries and the determination of the responsibility for their operation and development. The serious need of adequate quarters for library facilities, both in the general library and in college and departmental libraries was recognized and it was pointed out that many of the existing problems of the libraries could not be solved until the building needs are met. The inadequacy of library support in the past was stressed and the need of substantial increases in funds for the purchase of books and periodi-

cals was emphasized, if the position of the University is to be maintained. The report included many additional recommendations of varying degrees of importance, some of them relating solely to the University Library, others referring to particular libraries or groups of libraries or to the whole library system.

With these recommendations on record, the Library Board and those responsible for the operation of various libraries had the opportunity to consider what might be done immediately and what would require further consideration, discussion, and perhaps modification. The recommendations amenable to direct action have been adopted in considerable part, as will appear in the later sections of this report. The recommendations concerned with major realignments in the library organization clearly required more extended consideration by the Library Board and the library authorities of the several colleges and schools. To provide for the full expression of views on the proposals set forth in the Survey Report a series of conferences was arranged between the Library Board and the library representatives of the Colleges. Such conferences were held with the College of Agriculture, College of Home Economics, the Veterinary College, and the School of Industrial and Labor Relations. Conferences were not held with the other colleges and departments which maintain libraries, because it was agreed in conferences between the administrative officers responsible for these libraries and the Director that the recommendations were mutually satisfactory and there was no need for further discussion of them, although more detailed information on the meaning of some of the changes proposed was desired.

The conferences between the Library Board and the representatives of the Colleges disclosed substantial areas of agreement and general recognition of the need for greater integration of library facilities, services, collections, and administration. They disclosed, as well, problems on which there were differences of opinion and still others on which some modification of the proposals in the Survey Report appeared necessary because of state budget and accounting procedures. Full reports of these discussions were prepared and distributed to all participants. The reports are being studied by the Library Board with a view to formulating recommendations to be presented to the Board of Trustees in the course of the coming year. Further conferences with college library authorities will be held as necessary, so that all who are directly concerned will be fully informed on the recommendations to be made. The objective is to present a series of recommendations, which, in view of all the problems involved, will enlist general approval and support on the campus.

The cooperation and courtesy of the faculty, administrative officers, and library staff members in conferences at the time of the surveyors' visit to the campus, in supplying the data requested, and in the individual and group conferences which followed the presentation of the Survey Report are evidence of the value which members of the University attach to the provision of superior library facilities and their desire to assist in developing them. Library problems have taken much time of many busy people during the past year. By this expenditure of time and effort, these members of the University have earned the gratitude of all who will benefit from the improved library system which it is their purpose to develop.

COLLEGE AND DEPARTMENTAL LIBRARIES

As a result of conversations begun in the fall of 1947, and carried on at intervals during the winter, jurisdiction and budgetary responsibility for four college and departmental libraries and the Collection of Regional History were transferred as of July 1, 1948, to the University Library by action of the Board of Trustees, on the joint recommendation of the administrative officers responsible for these libraries and the Library Board.

The libraries involved in this transfer were: Business, Chemistry, Engineering, Physics, and the Collection of Regional History.

Budget provisions for the new year have made it possible to staff three of these libraries (Business, Chemistry, and Physics) with professional librarians who have had special training or experience in appropriate fields. The Engineering Library staff has been increased by the appointment of a new professional assistant, and provisions have been made for sufficient part time assistance to operate these libraries on a schedule similar to that of the University Library.

SPACE REQUIREMENTS

The need for more library space for readers, for books, and for library staff has been the theme of the librarian's annual report for a generation. In that time additional stacks have been provided in various areas originally designed for other purposes, the southwest addition to the stacks has been constructed and, within the past year, storage space has been made available in the basement of the Administration building and has been equipped with free standing stacks. These measures have been palliative and temporising in nature; they have come not to grips at all with the fundamental facts of the situation. The facts are these: the present library building was planned and built for an institution one-sixth the size of Cornell today; the rest of the University has grown, developed, expanded and, in the process, has in most respects, been provided with the additional space needed; meanwhile, the Library has continued to function and has tried to meet the greatly increased demands made upon it, working in a building that is so completely inadequate that it frustrates the best efforts of the library staff to provide the kind and quality of service which the University requires.

A university library requires steady expansion of its quarters, even though the number of students and faculty remains the same, for the simple reason that the books, periodicals, and newspapers added each year come to stay. They do not pass through the library and go on to some other place; a research library accumulates and holds materials for service to scholars. If it is to remain alive, if it is to fulfill the purpose for which it exists, its holdings must bulk ever and steadily larger and require greater space. As holdings increase substantially, the records through which they are controlled and the staff engaged in their acquisition, cataloguing, and servicing must also increase, and must be provided with expanded quarters.

Instead of recognition of this fundamental difference between a library building and other university buildings, the story of the Cornell University Library suggests that there has been an attitude approaching complacency or resignation with regard to the library building. The library building, when first occupied in 1891, was, as Mr. White stated at the laying of the cornerstone, "the finest University or College Library building yet erected in the United States; the largest, the most carefully planned, the most thorough in its equipment, the most beautiful in its adornment." This library building was an affirmation by the University of the central importance of the library to the teaching and research program of the University. But the building in use today, fifty-seven years later, has been changed only by the addition of stack space. The adjectives used in describing the new building in 1891 are applicable today in the negative. The library building has remained the same, while the rest of the University has grown and developed to its present great stature. Because the rest of the University has changed, the relative position of the Library has been completely altered.

The adequacy of the library building for the University as it existed in 1891, its present inadequacy and the needs for the future may be briefly set down as follows:

	1891	1948	Need
Seating capacity.....	425	426	2,000
Stack capacity.....	475,000 v.	675,000 v.	3,000,000 v.
Size of book collection.....	100,000 v.	990,000 v.	....
Size of faculty.....	140	900	....
Student enrollment.....	1,600	9,600	....
Seating capacity for.....	25% of students	4½%	20%

Seating capacity is set at 20 per cent of the student body because of the facilities available in college and departmental libraries, although the commonly recommended figure is 25 per cent. In the new central library building of a sister institution seats are being provided for 50 per cent of the student body.

The size of the stack needed is roughly three times the size of the present collection. Since a stack cannot be efficiently operated if it is more than 75 per cent—80 per cent full, such a stack would provide good working shelf space for approximately two and a half million volumes and thus should accommodate the acquisitions of approximately fifty years at the present rate of growth.

During the autumn meeting of the Board of Trustees, a short tour of the Library was arranged for Board members. The tour was designed to show the Trustees the difficult conditions under which the Library is trying to function. In the course of the tour several members of the party expressed their concern at the seriously crowded situation found in all parts of the library and voiced the conviction that action must be taken to expand the Library's quarters. A report on the tour was made to the Board of Trustees by Mr. Noyes and Mr. Flanigan.

The imperative need of increasing library space has been recognized to the extent of authorizing an architectural study of the possibilities of expanding the present building to provide adequately for the needs of the library. The study was begun in the summer of 1947, and, except for an interruption of three months, has been continued down to the present. A report on the study and a proposed plan for the expansion will be submitted to the Buildings and Grounds Committee of the Board of Trustees at an early date. When the report and the plans have been studied and evaluated, a decision must be made as to the advisability of an expansion of the present building, or the construction of an entirely new building. There are advantages in each procedure, and the final decision must be based on the best judgment that can be made in the light of all factors concerned.

LIBRARY STAFF

The staff of the library was substantially increased during the summer and early fall of 1947. In view of the great demand for professional librarians and for clerical workers, the Library was fortunate in being able to fill its budgeted positions with so many competent persons. In the case of the professional staff a fairly high degree of stability for these times was obtained, since most of the professional staff members appointed are continuing on the library staff. In the case of the clerical staff, a high turnover has continued but at least the beginnings of forming a more permanent clerical staff have been made. This part of the staff, if it is developed and expanded, can make a very important contribution to the efficient and economical operation of the Library, since there are many activities in the Library which can be performed by competent clerical workers, after they have had a sufficient amount of experience. Clerical workers who remain on our staff for only a short time do not become sufficiently familiar with the Library's activities or proficient in carrying them out to make it possible to assign the more complicated clerical procedures to them.

From the point of view of organization there has been one significant change in the course of the past year. This change, effective, January 1, 1948, was the creation of the position of Assistant Director for Technical Services. Through the addition of this new position, the Library achieved a balanced organization with two coordinate Assistant Directors, one for Readers' Services, the other for Technical Services. The Readers' Services include the departments that give direct service to readers; the Technical Services comprise the departments concerned with acquiring and preparing materials for use.

This new position was the natural outgrowth of efforts begun earlier in the year to effect closer integration of the procedures of the technical service department. As a first step, the Acquisition Librarian was asked to assume responsibility for this coordination, in addition to his regular duties. After six months experience under this arrangement, it was apparent that the beneficial results could be enhanced and consolidated by formal recognition of the importance of this work. The new position and the appointment of the Acquisition Librarian to fill it were therefore recommended to the President and approved by him. The statistical reports on acquisitions, cataloguing, and binding are evidence of the desirability of this broadening and strengthening of the library organization.

ACQUISITION

The staff of the Acquisition Department was increased at the beginning of the year and the operational procedures of the department were thoroughly reorganized during the first three months of the year. The chief elements in the reorganization were: 1. the introduction of a new multiple copy order form by which several separate records, accessions, bookkeeping, Library of Congress card orders, and tem-

porary catalogue and shelf-list cards were produced through one operation instead of five; 2. the elimination of dual searching of new titles by the Acquisition and Catalogue departments, by consolidating all searching and preliminary cataloguing activities in the Acquisition Department; and 3. the transfer of gifts, exchange, and government documents work to the Acquisition Department.

The record of the year's work shows what can be accomplished with a staff which is more nearly commensurate with the task of acquiring the library materials needed by the University than has been available in the past. Books, periodicals, and other library materials in the amount of \$99,925 were purchased during the year on the book funds appropriated for or transferred to the account of the University Library. In addition, multiple copies of books for reserve use were purchased by the Library on departmental accounts in the amount of \$1,604, for a total of \$101,529. The comparable figure for the preceding year was \$45,678. There has thus been an increase of \$55,851, or 122 per cent.

The number of items added to the University Library and its various collections was 34,829. The number of volumes added to other libraries of the University was 15,756 and the withdrawals 1,672. Thus the total net increase of all the libraries of the University for the year was 48,913.

The table below shows the increase for the year and the present extent of all the libraries of the University.

GROWTH OF LIBRARIES, 1947-1948

	<i>Items Added</i>	<i>Present Extent</i>
General Library	21,775	827,690
Transfers from Seminar Collections . . . . .	...	3,304
Total General Library		830,994
Wason Chinese Collection	1,339	45,705
Flower Veterinary Library	893	15,888
Comstock Memorial Library (Entomology)	475	3,870
College of Architecture Library	438	7,149
Van Cleaf Library (Zoology)	319	6,891
Barnes Hall Library (Religion)	143	4,659
Willard Straight Browsing Collection	95	2,088*
Icelandic Collection	85	22,871
Dante Collection	30	10,983
Petrarch Collection	17	4,624
Manuscripts	27	1,130
Maps	9,157	26,571
Other separately recorded collections	36	7,392
Total including maps and MSS	34,829	990,815
Law Library	2,800	110,234
New York State College of Agriculture Library and Departments	5,247	156,060
New York State College of Home Economics Library	1,562	16,602
New York State Veterinary College	426	3,432
New York State School of Industrial and Labor Relations Library	4,548	9,390
New York State Agricultural Experiment Station Library	562	22,415
Cornell Medical College Library	611	37,880
Cornell Aeronautical Laboratory Library . . . . .	...	3,808**
Total	15,756	359,821
Volumes withdrawn	1,672	
Net Additions	48,913	
Total in all libraries		1,350,636

*Reported for the first time.

**Estimate only.

The accumulated reserves in book funds as well as the adoption of a policy of greater initiative in book selection on the part of the Library have made a more vigorous acquisition program possible. At the request of certain instructional departments, the Acquisition Department has assumed responsibility for the selection of new publications in their fields for prompt purchase by the Library; in other fields, especially the technical and scientific fields, purchases are made only on departmental recommendations; in the case of journal files, new periodical subscriptions, and old or rare publications, the Acquisition Department has taken the initiative in bringing available titles to the attention of interested faculty members and has secured their recommendations before taking action. A system has been worked out with those faculty members who have been given departmental responsibility for book orders, by which secondhand catalogues are checked promptly and returned to the Library so that orders for desired items can be placed. This procedure has resulted in a marked increase in the number of secondhand items obtained. Through the regular issuance of want lists and the placement of advertisements in book trade journals, considerable success in obtaining out-of-print items has been achieved. Every effort has been made to take a broad view of the responsibilities of the department in order that, with the assistance of interested faculty members, the strongest research collection the available resources will support may be built up.

The acquisition of government documents was transferred from the Catalogue Department to the Acquisition Department, and the work of the unit was limited to the securing and checking in of material, while the cataloguing of these publications was assigned to the regular cataloguing staff. A count of materials received was kept for the period October to June, for the first time, and a total of 23,074 items was recorded. This figure does not include individual numbers of serial documents issued at regular intervals. In the course of the year eighty-five serial document sets were completed and are now ready for binding and cataloguing. The work of completion of sets in this field is a lengthy one and, while a good beginning has been made, there is much still to be done. This is particularly true as regards the publications of state governments. A systematic approach to the problem of securing state documents has been made by determining what publications exist, selecting those desired for the collection, and then undertaking the job of getting the publications wanted. It is hoped that this aspect of the work can be pushed vigorously in the coming year. Special efforts have also been made to build up the collection of hearings of Congressional Committees. Although the Library's holdings are still seriously incomplete, substantial additions were made during the year as a result of requests directed to several federal libraries and other agencies.

In February 1948, the acquisition work for the New York State School of Industrial and Labor Relations was transferred by mutual agreement from the School's Library to the Acquisition Department of the University Library. The terms of the agreement provide that the Industrial and Labor Relations Library place two members of its clerical staff in the Acquisition Department to do the necessary work in processing orders and incoming material; the determination of what is to be purchased is the responsibility of the Librarian of the Industrial and Labor Relations School; orders, invoices, and materials are processed as part of the regular activity of the Department and an invoice for all materials purchased during the month is submitted to the Industrial and Labor Relations Library at the end of the month. In due course, the University Library is reimbursed. This procedure has proved satisfactory to both libraries, and has made the avoidance of unnecessary and expensive duplication almost automatic. The proper functioning of the system requires close cooperation between the two organizations. In the period of approximately five months, purchases totaling \$5,455 have been made for the Library of the School of Industrial and Labor Relations.

While this arrangement has been mutually advantageous in itself, it may be considered to be of even greater importance as an example of a method by which certain library activities may be unified, even though the funds for their support are drawn partly from state and partly from endowed funds. The identity of the materials purchased on the two types of funds is clearly maintained, but the operation or process is conducted as a single, unified undertaking.

In order that faculty members and students might be regularly informed of the

new titles added to the libraries, the issuance of a *Fortnightly List of Acquisitions* was begun on October 29, 1947, and has been continued regularly. At the outset the list included only publications added to the University Library and some of the college and departmental libraries. In the course of the year, the new acquisitions of various libraries have been added until now the list is a complete record of the new titles in all the libraries on the Ithaca campus except Law and Home Economics. Comments of faculty members and graduate students indicate that the list serves a useful purpose and is much appreciated.

At intervals during the year sales of duplicate books were held in the entrance lobby of the University Library. The sales were enthusiastically patronized by faculty members, students, and members of the library staff, and most of the books offered for sale were disposed of at the modest prices set. It is hoped that this activity can be increased in the future, as it is one simple means of interesting students in owning and, perhaps, in using books. Income of \$1130 was derived from the sale of duplicates.

In February, 1948, through the cooperation of Professors Biggerstaff and Sharp and with the assistance of travel funds from the Rockefeller Foundation, Miss Gussie Gaskill, Curator of the Wason Collection, went to China to purchase books for the Collection and to continue her study of Chinese bibliography. The results of Miss Gaskill's efforts are apparent in a constantly mounting accumulation of Chinese books and periodicals which have already been received at the Library. From reports now available, this material constitutes only a small part of the total purchases made by Miss Gaskill.

Many noteworthy additions to the collections were made during the year. Among them are to be found several medieval and renaissance manuscripts, early printed books, collected or complete editions of important authors, and many long files of learned journals. The following titles are a representative selection from the total list:

- Agricola. De ortu & causis subterraneorum. 1558.
- Angelus de Clavasio. Summa angelica. 1488.
- Archimedes. Opera. 1544.
- Bibliographia oceanographica, 1928-1942. 15 v.
- Brisson. Ornithologie. 1760. 6 v.
- Church. Catalogue of books consisting of English literature and miscellanea. 1909. 2 v.
- Couperin. Oeuvres completes. 1932-33. 12 v.
- Curtis. The North American Indian. 1907-30. 40 v.
- Doehring. Kunst u. Kunstgewerbe in Siam. 1924. 3 v.
- Duhamel du Monceau. Traite des arbes et arbustes. 1800-19. 7 v.
- Equicola. Institutioni di rima della lingua volgare. 1541.
- Fuchs. Opera. 1566-67. 3 v.
- Gesner. Bibliotheca universalis. 1545.
- Hyginus. De mundi et sphere ac utriusque partium declaratione. 1512.
- Kircher. Musurgia universalis. 1650. 2 v.
- Kirnberger. Die kunst des reinen satzes in der musik. 1774-79. 2 v.
- Lully. Oeuvres completes. 1931-39. 10 v.
- Mazzatinti. Inventari dei manuscritti delle biblioteche d'Italia. 1890-1945. 73 vols.
- Mizauld. Les ephemerides perpetuelles de l'air... astrologie des rustiques. 1554.
- Palestrina. Complete works. 1939-42. 15 v.
- Pergolesi. Opera Omnia. 1939-43. 25 v. in 5.
- Petrarca. De contemptu mundi. De vita solitaria. De otio religiosorum. Epistolae. Ital. MS. about 1450.
- . De secreto conflictu. 1498.
- Rameau. Traite de l'harmonie reduite a ses principes naturels... 1722. 2 v. in 1.
- Russia. Laws, statutes, etc. Svod zakonov rossijskoi imperii. (General code of laws of the Russian empire), 1916. 100 vols.
- Acquila: Zeitschrift des ungarischen ornithologischen instituts. v. 1-45, 1894-1939.
- Annuaire des cinq departements de la Normandie. 1-80 annee, 1835-1914.
- Archiv fur augenheilkunde in deutscher und englischer sprache. v. 18-82, 1887-1917.

- Arkiv russkoi revoliutsii (Gessen). v. 1-22, 1921-37.
 Berajah-Zoographia infinita. v. 1-25, 1905-35.
 Bijdragen tot de taal-, land- en volkenkunde van Nederlandsch India. v. 1, 1852/53-date.
 Bulletin de la Societe Liegeoise de litterature wallonne. v. 1-63, 1858-1927.
 California historical society quarterly. v. 1, 1922-date.
 Colorado magazine. v. 1, 1923-date.
 Commentarii mathematici Helvetici. v. 1, 1929-date.
 Delaware historical society. Historical and biographical papers. Collected ed. v. 1-62, 1879-1930.
 Deutsche vogelwelt. v. 1-59, 1876-1935.
 Entomologists annual. v. 1-20, 1855-74.
 France. Ministere de Finance. Bulletin de statistique. v. 1-120, 1877-1937.
 Indian mathematical society. Journal. v. 1, 1909-date.
 L'Italia dialettale; rivista de dialettologia italiana. v. 1, 1924-date.
 Janus; archives internationales pour l'histoire de la medicine. v. 1-45, 1896-1941.
 Matematisk tidsskrift. (Matematisk forening i Kjøbenhavn). ——— A. 1899-1942; ——— B. 1899-1942.
 Nieuw archief voor wiskunde. v. 1-20, 1894-1940.
 Ornithologische monatsberichte. v. 1-44, 1893-1936.
 Pisa. Scuola normale superiore. Annali. Scienze fisiche e matematiche. v. 1, 1871-date.
 Revue Benedictine. v. 1-41, 1884-1930.
 Revue de theologie et philosophie. v. 1-44, 1868-1911; n.s.v. 1, 1913-date.
 Revue des etudes slaves. v. 1-21, 1921-1945.
 Revue numismatique. v. 1-65, 1836-1911.
 La revue socialiste, syndicaliste et cooperative. v. 1-59, 1885-1914.
 Rivista geografica italiana. v. 4, 1897-date.
 Rivista Italiana di palacontologia. v. 1, 1895-date.
 Rivista musicale italiana. v. 1, 1894-date.
 Royal society of medicine. Proceedings. v. 1, 1907-date.
 Schweizerische palacontologische gesellschaft. v. 1-63, 1874-1942.
 South Dakota historical collections. v. 1, 1902-date.
 Tijdschrift voor Indische taal-, land- en volkenkunde. v. 1-78, 1852-1938.
 Utah historical quarterly. v. 1, 1928-date.
 Vox Romanica; annales Helvetici explorandis linguis romanis destinati. v. 1, 1936-date.

CATALOGUING AND CLASSIFICATION

The number of titles catalogued during the year was 15,072, the number of volumes 27,486. Both of these figures represent increases of 50% over the cataloguing production of the preceding year.

This marked increase was achieved with the addition of only one professional cataloguer to the staff, and despite the fact that the department was at full strength for only six months of the year, that all new cataloguing was suspended for one month in December-January, and that a substantial amount of the time of two of the most experienced cataloguers had to be used for four months to clear up a large arrearage of cards which had been withheld from the catalogue for various kinds of corrections.

The increase was made possible through coordination of acquisition and cataloguing procedures, a substantial increase in the clerical staff of the department, sharp distinction between the professional and clerical aspects of cataloguing, the combination of classification and subject cataloguing into a single operation and the adoption of less meticulous cataloguing rules.

The coordination of procedures of acquisition and cataloguing was partially achieved early in the year. This integration, when combined with the full use of the clerical staff for all clerical operations and the consequent freeing of the professional cataloguers to do cataloguing only, made it possible to increase cataloguing production substantially. The operations of each department were worked out in detail so that every step through which a book must go from its initial selection until it is placed on the shelves ready for use, with a full set of cards filed in the catalogue

and the title included in the *Fortnightly List*, was planned and provided for and the various responsibilities of individual staff members in the process were determined and assigned.

The Survey Committee was asked to give particular attention to the classification system which has been in use in the University Library for the past sixty years. This system had become increasingly difficult to use, and it was clear that not only its initial application but the continuing work of shelving and circulation were more expensive than they should be because of various peculiarities in the notation of the call numbers. Dissatisfaction with the system has been expressed frequently for the past thirty years, without any definite action being taken to improve the situation. Dr. Tauber, of the Survey Committee, made the classification a matter of special study and after reporting his findings to his colleagues, the surveyors made a joint recommendation to the Library Board that the Library of Congress classification be adopted at an early date for all new titles added to the collection. They recommended further that a program of selective reclassification, involving about 200,000 volumes, be undertaken at a later date. In this way, the problem of reclassification which had been the deterrent in any consideration of change in the past, was reduced in scope and appeared susceptible of solution.

The surveyors' recommendation was submitted to the Library Board in December and the Board voted approval of the proposed change to be effective January 1, 1948. In order to make the change smoothly new procedures were carefully worked out, all cataloguing work in progress was cleared up and all card production and filing which was underway at the time was completed before the new system was introduced. To accomplish this, it was necessary to suspend all new cataloguing, except for reserve books and other rush items, for a period of almost a month in December and early January.

In addition to the change in classification it was agreed that it would be desirable to follow the Library of Congress practice closely in subject cataloguing, since this would make it possible to take full advantage of the information on Library of Congress cards, which are obtained for approximately 70% of the titles added to the collection each year. Strict adherence to Library of Congress subject headings would result in cards that could not readily be filed in the existing card catalogue. By an elaborate system of cross references, this problem could have been solved, but in view of certain other serious inconsistencies in the catalogue plus uncertainty regarding the cataloguing of all classified materials in the stack, it was judged desirable to begin a new catalogue with the adoption of the Library of Congress classification. The two catalogues, it is admitted, have been a source of some difficulty to users, and it is readily agreed that they must be put together at the earliest possible date. Before that can be done, however, the old catalogue must be edited and brought into conformity with the principles on which the current cataloguing is being done. The editing of the catalogue entries, it is believed, can be most efficiently done in connection with the projected reclassification program.

The classification of books in this Library has been a separate process for many years, all of the work being performed by one classifier. This system of work was considered necessary since members of the cataloguing staff were not well-versed in the classification schedules. In preparing for the change to the Library of Congress system, it appeared desirable to make the individual cataloguers responsible for classification as well as for cataloguing. By combining the two operations into one, a second separate examination of a book to determine its chief subject content is eliminated. With the transfer of classification to the Catalogue Department, the classifier was moved into a position as reviser of cataloguing and classification in the Catalogue Department.

Thus, in January, with new procedures carefully outlined and with the staff as fully instructed as possible in the short time available, the new classification and subject cataloguing system was put into effect. It was not expected that this change could be made without encountering problems and difficulties which had not been foreseen. Problems were encountered but none of them were of such a serious nature as to cause undue delays or interruptions. The most annoying problems have arisen in connection with the reclassification of materials already in the library, since the question of reclassification arises whenever a new edition, an added copy, or a new title by an author one or more of whose works were classified

on the old system, is catalogued. Arbitrary decisions have had to be made in some cases. The general policy has been to hold reclassification to a minimum, since it is apparent that the normal staff cannot handle current accessions and a large volume of reclassification. The new material clearly must have first attention.

The changes described above have been made efficiently and without serious delays by the staff of the Catalogue Department. The adaptability of the staff members, their willingness to devise and accept new procedures, and the good spirit with which they have approached their many problems and dealt with them successfully is evidence of the high morale of the Department.

The cataloguing and classification of maps has progressed steadily during the year, and the Library's collection of Army Map Service deposits is completely classified, catalogued, and available for use.

The clerical staff of the department was substantially increased at the beginning of the year. Shortly thereafter this staff was moved from the Cataloguing Room to one of the seminar rooms on the floor below. Here all work with Library of Congress card orders, typing, cutting of stencils, and mimeographing of cards is done by the staff of the Card Section working under their own supervisor. The problem of keeping the Section staffed has been difficult, but nevertheless the production record for the year shows an increase of 100% over 1946-1947. The members of this Section have shared with other members of the Catalogue Department the job of filing over 80,000 cards in the card catalogues of the Library.

In the general area of responsibility assigned to the Catalogue Department much significant work has been accomplished. What remains to be done, however, is far greater than what has been done. Among the projects which must be undertaken and for which the Catalogue Department will have an important responsibility are the following: 1. Development of a full union catalogue of the holdings of all libraries on the campus; 2. Compilation of a union list of serials in all campus libraries; 3. Cataloguing and shelf-listing of several departmental library collections which are uncatalogued or incompletely catalogued; 4. Reclassification and selective recataloguing of a portion of the book collection (ca. 200,000 v.); 5. Editing of card entries in the old catalogue; 6. Incorporation of various special collections and groups of books, now separately recorded, in the public card catalogue; 7. Transfer of entries from the present loose-leaf shelf-list to cards.

If significant progress in these projects is to be made at an early date, an increase in the staff of the Department is essential.

PERIODICALS AND BINDING

The University Library is currently receiving 3,004 periodicals and 35 newspapers. During the year, 428 new periodical titles were added. Of these, 297 are subscriptions and 131 are gifts and exchanges. Among the new titles, the following may be noted as a representative selection:

Applied scientific research	Modern quarterly
Archaeology	New colophon
Biochimica & biophysica acta	Personnel psychology
Canadian art	Research
Delaware history	Romance philology
Industrial and labor relations review	Scriptorium
Journal of business	United Nations biographical record
Library literature	Western political quarterly

The record for the year shows an increase of approximately 50% in the number of volumes bound and repaired. While the increase is substantial and represents perhaps the maximum load which the present staff can handle, it still leaves us far short of the goal which must be achieved, if the entire collection is to be put in good physical condition. The binding staff surveyed the accumulation of unbound material in the stacks in the course of the year. This study shows that considerably more material is awaiting binding than has been sent to the bindery during the past year. It is believed that some of this material need not be bound, but can either be retained in unbound form, or, in some instances, discarded. However, the survey shows that after all eliminations have been made, there is still a substantial body of material which must be bound. If this binding arrearage could be made a special

project, with special funds provided, it would be highly desirable. If it is to be dealt with in addition to, and as an adjunct of, the binding of current materials, it will require a number of years to bring the collection into good physical condition. Another aspect of the problem of improving the physical condition of the book collection is the treatment of leather bound volumes with a leather preservative. Many volumes have deteriorated seriously because of lack of attention. It has been possible in the past year to treat only a small group of books. This effort will be continued as there is opportunity, but it is doubtful if it can ever be thoroughly and satisfactorily done, so long as it must be regarded as a job to be done by Circulation Department employees in their spare time. In order to have the work done properly and in a reasonable length of time, specific provision should be made at an early date either to add a person to the staff or to employ a firm of commercial binders for this purpose. The Law Library has had very satisfactory service of this kind from a commercial binder.

As noted a year ago, the service provided by local binders has been below standard in quality and has frequently involved long delays. An attempt to break out of this situation was made a year ago by sending some of the binding to a Syracuse bindery. This experiment was successful to a limited extent, but it became apparent in the fall that the volume of work required by the Library was greater than this bindery was prepared to absorb. Trial shipments were, therefore, sent to several other binders during the fall and quality of work, promptness of service, and prices were compared.

With the assistance of the Manager of Purchases, these and other binders were asked to submit proposals on a specified minimum annual volume of binding to be done for various libraries and other units of the University. At the same time, the question of establishing a University bindery was considered. In view of the difficulties now being encountered in several university bideries, it was considered undesirable to try to push such a plan at the present time. The question should be investigated again at a later date. With this decision made, the problem resolved itself into the selection of the best bindery from the point of view of service, quality, and price. After several conferences with binders and among the interested librarians and the Purchasing Department, a contract was negotiated by the Purchasing Department which provided for service on a four-week basis, and a guaranteed price schedule for the calendar year. The service under this contract was good during the first four or five months. However, there are indications now that the bindery has become overloaded and will not maintain the delivery schedule. The price agreed upon has been maintained despite a general increase in book binding prices.

In order to secure the advantages offered by this contract, it was necessary to give the binder a uniform set of instructions. Since practices varied among the several libraries, it was agreed that a committee representing the libraries would work out a mutually satisfactory code for the preparation of materials for binding and for the guidance of the binder. These instructions were devised without serious difficulty and have been followed in their main outlines by the libraries sending material under this contract. These libraries are the University Library, including the libraries of the Endowed Colleges and the Veterinary College, the Agriculture Library, the School of Industrial and Labor Relations Library, and the Law Library.

USE OF THE LIBRARY

The Library was open for service on 337 days. The total recorded use of books for the University Library and the reserve collection in McGraw Hall was 237,732 volumes. The number of books charged out for home use increased approximately 15 per cent; the increase in the use of reserve books was approximately 20 per cent. Detailed records on circulation are given together with other statistics near the end of this report.

The Circulation Department has, in addition to its normal activity of supplying stack and reserve books on request, been engaged in other tasks of importance to all users of the library. In the late summer of 1947, the indicator charging system was replaced by the McBee punched card system. The new system eliminates the hand copying of charges by the Circulation Department and greatly simplifies the task of determining what books are overdue and should be returned. The change-over was a major undertaking in itself as some 70,000 charges had to be transferred from

the old record to the new. In the process, many of the existing charges were verified and corrected in order that the new file might be as accurate as possible. Since the McBee system requires the borrower to fill out a call card which becomes the charge record, explanations of the new procedure and examples of properly prepared cards were posted on the card catalogue and the Loan Desk to assist users in becoming familiar with the method of presenting their requests. The new procedure became effective September 25, with no delays or serious problems of any sort.

The need of finding shelf space in the stacks for incoming books has been noted in many previous reports. Near the close of last year, arrangements were made for the use of the basement stack floor in the Law Library and also for a room in the basement of the Administration building as storage areas for sets of journals and other infrequently used publications. Transfer of these materials was begun in the summer of 1947 and has been continued up to the present. For the most part, the work has been done by the regular staff of the department with special crews engaged occasionally for short periods. Working in this way, with the moving planned as part of the regular activity of the staff, approximately 70,000 volumes were moved in the course of the year.

The movement of books out of the library stacks is only the first part of the job. Before relief can be made fully effective in the stacks, many more volumes must be shifted in the stacks themselves. This has been especially true since it has been considered necessary to place volumes in their correct classified order on the shelves. Because of the exigencies of shelving in recent years, much material was of necessity shelved out of its normal order. It has been a trying job to get everything into proper order and the job is by no means complete. The adoption of the Library of Congress Classification gave the shelveis the additional problem of providing for a separate shelving scheme for this new material. Temporary arrangements made in mid-year have now been expanded so that with relatively minor adjustments new publications acquired during the next few years can be put in place. These various shifting operations in the stacks require a great deal of time since, in the past year, they have involved approximately 450,000 volumes. They will continue to require a substantial amount of staff time until an adequate book stack is provided in the library building. It is to be hoped, however, that when the present moving and shifting operations are completed during the course of the next year, the amount of effort expended on this activity can be materially lessened.

In the course of the year the general reading collection shelved in the main reading room was removed. Some volumes were added to the stack collection; others were sent to the duplicate collection and have been disposed of through regular procedures of sale and exchange. In place of this collection which had become unattractive and badly out of date, a selection of books designed to appeal to readers for recreational purposes has gradually been built up on the open shelves. The work of selecting this collection has been shared by various members of the library staff, but the chief responsibility has been assumed by the Circulation and Reference Departments.

A serious problem confronting the Circulation Department is that of locating for readers books which are neither charged out nor in place on the shelves. The chief cause of this difficulty seems clearly to be lack of control of the stacks, resulting from the relatively large number of exits which cannot be kept under surveillance. This means that many books are taken from the stacks without being properly charged. While some of these books are eventually returned to the Library, they are, in the meantime, "missing books" which cannot be produced on demand. A contributory cause is the incorrect re-shelving of books by stack attendants and by those who hold stack permits. The work of stack attendants is now being closely checked and a shelf-reading program is underway. Persons other than library staff members are urged not to reshelve any books in the stacks. Efforts to minimize this problem will be continued on an intensified scale, but it is doubtful if it can be brought under control so long as the stack exits are unsupervised. It has been suggested that the missing books problem can only be solved by the installation of an inspector at the doors leaving the library building and the requirement that all materials being taken from the building be submitted for examination. This appears to be a drastic step which should not be taken unless the problem gets out of hand.

In the past year several members of the library staff have assisted residents of some of the women's dormitories in selecting small groups of attractive, readable books to be placed on deposit in the dormitories for the use of students. The work done to date is only a beginning, but there is reason to believe that this is a project which should be extended and developed as staff and funds permit. It has long since been established that the easy accessibility of books and other printed materials is a primary factor in encouraging people to read. It is this idea which lies back of the extensive house libraries at Harvard and the dormitory libraries at Chicago. On a smaller scale, there is no reason why collections similar to these should not be established in Cornell dormitories for men and women.

The Locked Press section of the stacks has been expanded and its contents as well as those of the Vault completely inventoried. All new purchases of rare and expensive publications are shelved in the Locked Press. Additions to this collection are also made regularly from the stacks on the recommendation of members of the faculty and library staff. This is at best a haphazard approach to an important job. It has been clear for some time that the Library needs one staff member who is an expert on rare books and who could make a systematic examination of the stacks and withdraw all rare materials from the open shelves. This staff member, when appointed, could also assume responsibility for surveying the physical condition of the rare books and arranging for such restoration as may be practicable.

The closer relationships being developed among the libraries of the University have emphasized the inadequacy of the messenger service between the University Library and the libraries of colleges and departments. At present we depend on a messenger operating on foot for normal deliveries. When the deliveries are heavier, a hand cart is used or the private automobiles of members of the library staff. When the job warrants it, a University truck is engaged. It is obvious that this problem will not be solved until a light truck is provided for library deliveries, such a truck to operate on a regular schedule among the libraries of the campus in the same way that the Campus Messenger Service now functions.

REFERENCE DEPARTMENT

The Reference Department, as a separate unit of the Readers' Services of the Library, was established at the beginning of the year, with a professional staff of three members, two part-time graduate assistants, and a clerical assistant for inter-library loan work. The clerical assistant is shared with the Circulation Department. Members of the department had the task of giving reference and bibliographic service to readers from the outset, plus the task of assembling a satisfactory collection of reference books and organizing the staff and its procedures for efficient work. On examination, it was found that many of the volumes shelved in the Reference Room were no longer of value for reference purposes, whereas many of the recently published reference books had been shelved in the stacks. Over a period of several months a two-way transfer of materials was carried on, which resulted in a greatly strengthened reference collection. At the same time Mudge's *Guide to Reference Books* was checked against the catalogue and all volumes of current interest not in the library were ordered. Other bibliographies were also checked or examined for titles which should be added to the reference collection. This, of course, is a continuing process which must be carried forward if the collection is to be as useful as it should be. Along with the assembling of the reference collection went the job of establishing the necessary records for its control and use. The several classifications which have been applied to the reference collection make this an annoying problem. The reclassification of the entire reference collection has thus been given the top priority, when any substantial reclassification project can be undertaken. The collection now assembled for convenient reference use numbers approximately 5,000 volumes.

The Reference Department has provided general information on the library and the use of the card catalogue, bibliographical assistance and advice, assistance in the use of government publications, and specific information in response to requests from readers throughout the year. The total number of requests for assistance under the various categories was approximately 10,000. While this number is not impressive when compared with the number of inquiries answered by the

reference departments of large university libraries, it is considered an important achievement for the first year of the Department's existence.

At the request of several instructors the Reference staff with the assistance of the Circulation Department gave a period of instruction in the use of the library, including the card catalogue, the reference collection, periodical indexes, etc., to the members of sixteen freshman English classes during the fall months. This instruction has apparently been well received and plans are now being developed for a similar period of instruction to be given to all sections of freshman English during the coming fall. In furtherance of plans to familiarize students and persons new to the campus with the Library's collections and procedures, a hand book is being prepared and will be available for distribution at the opening of the fall term.

The methods of applying for and using interlibrary loans have been revised and brought into close conformity with the recommendations of the Interlibrary Loan Code, which is generally observed by American Libraries. It is a pleasure to report that these changes have been accepted in an understanding and cooperative manner by faculty members and graduate students. The systematization has had the desirable effect of greatly reducing the amount of correspondence relating to these loans. In a revision of the lending policy of the Library, requests for loans from other libraries have been more carefully scrutinized and some types of requests, chiefly those for current unbound issues of scientific journals, have generally been declined. Despite the closer examination of requests for loans, the number of volumes sent out was approximately the same as last year, 1232 volumes. The following libraries were the heaviest borrowers:

Syracuse University.....	76	Anso	36
N. Y. State Agricultural Experiment Station, Geneva.....	67	Elmira College.....	29
University of Rochester.....	51	E. I. duPont deNemours & Co.....	28
Hobart and William Smith Colleges	50	Wells College.....	28
Columbia University.....	36	Harvard University.....	27
		Eastman Kodak.....	26

For the use of faculty members and graduate students the Library borrowed 551 volumes from 94 institutions. The chief sources of these loans were the following libraries:

Princeton University.....	69	University of Rochester.....	14
Harvard University.....	65	University of Illinois.....	12
Library of Congress.....	56	American Museum of Natural History.....	11
Columbia University.....	36	Ohio State University.....	10
Yale University.....	23	University of Pennsylvania.....	10
Northwestern University.....	17		
University of Cincinnati.....	14		

In an effort to display selections of the great quantity of interesting and valuable materials in the Library's collections, and also to bring in traveling exhibits related to the Library's activities, a readjustment of the furniture in the lobby was effected in the early autumn. This permitted the placing of a number of exhibit cases in space previously occupied by a portion of the card catalogue. In succeeding months the following exhibits were prepared and mounted by members of the Exhibit Committee, consisting of the Assistant Director for Readers' Services, and the Circulation and Reference Librarians:

Wason Chinese Material; Heinrich Heine; Astronomy; Fifty Books of 1946; Regional History Manuscript Resources; Army Day; French Book Production; Foreign Book Illustration; and Cornelliiana.

Near the close of the year v. 32-33, of *Islandica* was published. This volume, *History of Icelandic Prose Writers, 1800-1940*, by Professor Stefan Einarsson of Johns Hopkins is the first full scale historical study of modern Icelandic literature to be published. It is another notable work in the long series of studies on the bibliography and literary history of Iceland based on the Fiske Icelandic Collection.

Requests for the services of the Faculty Research Assistant have, during the past year, been channelled through the Office of the Dean of the Graduate School and the Committee on Research, and all projects approved by the Committee are reported to the Director for confirmation. This system has proved satisfactory to all

concerned. In the course of the year the following publications to which the Faculty Research Assistant had made important bibliographical contributions were issued:

Saints' Lives and Chronicles in Early England, by Charles W. Jones.

Quest for Mysteries: the Masonic Background for Literature in Eighteenth-Century Germany, by Heinrich Schneider.

It has been apparent that library service on the campus could be improved, if the people engaged in providing this service to the University community were better acquainted. This feeling was sufficiently widespread to encourage a group of librarians to arrange for a social meeting to which all persons engaged in library work at Cornell were invited. The event itself was a success and the Committee responsible for it was asked to go forward with the development of a continuing organization. Under the leadership of Miss Vivien Warters, Librarian of the College of Home Economics, this task has been completed and the new organization will get under way this fall. The Committee members have performed a difficult task and deserve the thanks of their colleagues.

Less formally, but with the same general objective, a series of biweekly luncheon meetings for department heads and other members of the professional staff of the University Library has been held since early in the spring. These meetings have helped staff members to get acquainted with each other and have developed a more thorough understanding not only of the general problems and plans of the libraries, but, to a limited extent, of the problems faced by individual departments. It is hoped that attendance at these meetings can be broadened so that there may be a fuller comprehension of the essential unity of the services being performed by the libraries.

Conferences attended by representatives of all or most of the campus libraries have been held as seemed desirable to consider such problems as: circulation policies and procedures, binding, and serial records.

GIFTS

The Library each year is the recipient of many gifts from members of the University community and from alumni and friends of the University. The additions made to the collections through the generosity of its friends have made it possible for the Library to count among its holdings many useful and rare volumes which otherwise it might not have. These contributions improve and enhance the Library's resources for scholarly work and will thus benefit the generations of scholars and students who may have opportunity to use them through the years. For these gifts, the Library is under obligation to its friends and wishes to express its gratitude. Some of the more important gifts are noted below individually.

From members of the University faculty the Library each year receives many gifts ranging from individual volumes and pamphlets to substantial collections of important publications. In the past year the Library has received from Mr. R. L. Arends of the English Department, eighteen volumes on the history of Methodism; from Professor Morris Bishop, a group of works of recent French literature and a check for \$100; from Professor Paul W. Gates, several periodical volumes and issues of early mid-western newspapers; from Professor Henry E. Guerlac, a small collection of French books; from Professor Paul T. Homan, a substantial group of periodicals, government documents and pamphlets; from Professor C. W. Jones, a copy of his recently published *Saints' Lives and Chronicles in Early England*, and several other volumes; from Professor M. L. W. Laistner, a copy of his book *The Greater Roman Historians*, as well as several books and journals; from Professor J. F. Mason, a small group of books dealing with the Society of the Cincinnati; from Professor Helen Monsch, 198 books on various subjects; from Professor W. H. Stainton, several volumes of periodicals dealing with World War II; from Professor Walter F. Wilcox, a large group of periodicals, yearbooks, and reports dealing with statistics; and from Professor A. H. Wright, several books and periodicals in the field of zoology. The Library wishes to acknowledge with sincere thanks these and all other gifts from members of the faculty during the year.

The Collection of Regional History has again presented to the Library a varied group of books, acquired during the year, which were considered to be of greater

usefulness in the general library collection rather than with the manuscript collection in Boardman Hall.

The Cornell University Press has continued its practice of sending one copy of all of its publications to the Library.

Through the gift of Mr. Arthur H. Dean, the Library and the College of Engineering received a valuable collection of autograph letters, collected by Robert A. Thurston, as well as a collection of Professor Thurston's books, photographs, and memorabilia.

Mrs. William N. Barnard has given the library a collection of 175 volumes from the library of the late Professor Barnard, together with some of his manuscript notes and papers; and Mrs. J. H. Tanner has made a gift of F. Bunkley's *Japan*, and F. H. Smith's *Venice Today*.

The Library is indebted to Mr. Coney Sturgis for a 1494 edition of Herodotus and a group of books of classical and Romance language interest as well as for a miscellaneous collection of books, pamphlets, and periodicals; to Miss Libbie Sweetland of Dryden for a miscellaneous collection of 70 volumes of books and periodicals; and to Harold E. Worden, for a set of Brewer's *Sketches*, in 8 volumes.

The Library has again received the royalties on President Edmund E. Day's book, *Statistical Analysis*.

The Parke-Bernet Galleries, at the suggestion of Carter R. Kingsley, sent to the Library a collection of its catalogues of book, print, and autograph sales. Mr. Kingsley was also the donor of an early Bath, N. Y., imprint.

The Library Associates assisted in the purchase of the Mazzatinti, *Inventari dei manoscritti delle biblioteche d'Italia*, by contributing \$250 toward the purchase price.

Diedrich K. Willers arranged to present a miscellaneous collection, chiefly 19th century publications, from the Willers' family home at Interlaken, N. Y.; and Charles N. Pinco presented an accumulation of technical and other data secured in Eastern Europe in the middle thirties. A collection of the papers of the late Professor Vladimir Karapetoff was the gift of his widow.

Mr. Frederick S. Crofts presented a copy of the first volume of the Bowker Lectures on Book Publishing; Nellis M. Crouse made the Library a gift of his new book *The Search for the North Pole*, as well as several other items; and Trustee Frank Gannett donated two volumes concerned with his experiences as a newspaper publisher.

Again this year the Library has been the recipient of a series of important gifts from Victor Emanuel to the Wordsworth Collection. The materials added this past year include several groups of manuscript letters and poems, the first editions of six of Wordsworth's works, a book from Wordsworth's library with his autograph, and a collected set of Wordsworth's Works. The Wordsworth Collection is thus steadily consolidating its position of preeminence in its field, and for this, the Library and the University are indebted to Mr. Emanuel for his continuing interest and his unflinching support.

The Library wishes to thank these and all other donors for their gifts during the past year and at the same time to bespeak the kind generosity of these and other friends for the future.

Two book funds subscribed by friends and former students of two members of the faculty have been presented during the past year. The first is a fund to honor Professor A. H. Wright of the Zoology Department, now Emeritus, but still an indefatigable worker for the Library. The A. H. Wright fund has almost reached its goal and will shortly be producing \$100 annually for the purchase of books in vertebrate zoology. The second fund, the Frank O. Ellenwood Memorial Book Fund, has only recently been started. It will be permitted to build up to a fund of \$2000, the income of which will then be used for the purchase of books for the Engineering Library.

These two funds are examples of a means of honoring or memorializing a faculty member, alumnus, or friend, in a dignified and permanent manner. The funds are set up as endowments and only the income is used. All books purchased on such funds carry an identifying book plate appropriately inscribed with the name of the person in whose honor the fund has been established.

STATISTICAL RECORDS

For convenience of reference, such library activities as can be usefully described statistically are reported below. The reports this year contain no separate section on classification, since classification is now included in the cataloguing report, nor on registration of borrowers, since the Treasurer's receipt is now accepted in lieu of registration at the Library.

The first group of statistics refers to the University Library, and the McGraw Reserve Room and Business Library. Comparative figures for preceding years appear in the columns at the right.

The second group of statistics presents data on circulation, acquisitions, and expenditures of all the libraries of the University, insofar as they were readily obtainable. It is to be emphasized that these figures are incomplete and do not fully represent the activities and expenditures of the libraries of the University. It is hoped that this portion of the report can be made more complete and accurate in the future. Only the generous cooperation of the librarians of the Colleges, Schools, and Departments has made it possible to present this composite picture of the Cornell libraries. I wish to record my sincere thanks to them for their assistance in this undertaking.

I. UNIVERSITY LIBRARY

<i>Cataloguing and classification</i>	1947-48	1946-47	1945-46
Volumes and pamphlets catalogued.....	27,486	17,291	15,898
Titles.....	15,072	10,129	9,328
Volumes added to cards.....	8,796	6,864	....
New editions (Oct.-June 1947-48).....	225	....	....
Added copies (Oct.-June 1947-48).....	1,361	....	....
Maps catalogued.....	9,157	5,131	419
Manuscripts.....	13	15	7
Volumes recatalogued.....	754	393	224
Volumes reclassified (Jan.-June).....	1,604	....	....
Titles reclassified (Apr.-June).....	568	....	....
Microfilms.....	38 titles on 96 reels	33 titles on 73 reels	....
Filing (Oct.-June; no record for July-Sept.).....	79,080	....	....
Card Production			
L. C. cards completed.....	50,504	20,245	....
Multilithed cards completed.....	4,020	....	....
Typed cards.....	27,311	18,624	15,767
Stencils.....	887	....	....
Cards added to.....	7,455	8,414	8,811
Cards corrected.....	7,273	3,548	2,445
<i>Periodicals and Binding</i>			
Periodicals currently received			
By subscription.....	1,539	1,310	1,205
By gift and exchange.....	1,465	1,420	1,380
Newspapers currently received.....	35	....	....
Total.....	3,039	2,730	2,585
Binding:			
Volumes of serials bound.....	4,857	3,628	3,235
Volumes repaired.....	1,165	996	1,381
Books bound.....	3,027	1,705	....
Total.....	9,049	6,329	4,616

PRESIDENT'S REPORT

	1947-48	1946-47	1945-46
<i>Circulation</i>			
Home use (7-Day 10,028).....	81,698	70,469	46,330
Reading Room.....	19,951	37,994	58,469
Stall.....	4,935	5,085	3,135
Seminar.....	1,504	3,790	1,960
Laboratory.....	762	4,550	4,756
Other.....	1,343	....	....
Total.....	110,193	121,888	114,650
Reserve Room			
Reading Room (McGraw—37444).....	118,220	105,008	55,783
Overnight (McGraw—1911).....	8,999	....	....
Other (McGraw).....	320	....	....
Total.....	127,539	105,008	55,783
<i>Reference</i>	1947-48	1946-47	1945-46
Interlibrary Loans			
Volumes loaned.....	1,292	1,260	....
Volumes borrowed.....	551	604	....
Reference Questions			
General information and bibliographical (less than 15 min.).....	8,828	....	....
Search questions (more than 15 min.).....	599	....	....
Circulation of Reference Books.....	286	....	....

II. CORNELL LIBRARIES

<i>Acquisitions</i>	<i>Items Added</i>	<i>Withdrawn</i>	<i>Present Extent</i>
University Library*.....	34,829	....	990,815
Law.....	2,800	41	110,234
Agriculture and Departments.....	5,247	1,587†	156,060
Home Economics.....	1,562	18	16,602
Industrial and Labor Relations.....	4,548	26	9,390
Veterinary‡.....	426	...	3,432‡
Geneva Experiment Station.....	562	...	22,415
Medical College.....	611	...	37,880
Aeronautical Laboratory.....	...	...	3,808§
Total.....	50,585	1,672	1,350,636
Regional History Collection (chiefly single manuscripts).....	1,030,624		2,553,225 items

*University Library includes special collections and college and departmental libraries.

†1038 volumes previously withdrawn, but unreported.

‡Does not include Flower Library of 15,888 volumes. Flower Library counted as part of University Library.

§Estimate only.

LIBRARIAN'S REPORT

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<i>Circulation*</i>	<i>General</i>	<i>Reserve</i>	<i>Reserve Overnight</i>	<i>Inter-Library Sent Rec'd</i>	
University Library **	110,859	118,540	9,285	1,292	551
Departmental Libraries †	6,511	935	621	...	...
Architecture	4,411	...	1,175	1	24
Engineering	4,962	...	774	...	...
Agriculture and Departments †	14,325	35,636	1,848	272	145
Home Economics	11,110	67,141	3,461	25	35
Industrial & Labor Relations	10,499	8,921 ‡	708 ‡	71	48
Veterinary	4,077 §	...	...	55	58
Geneva Experiment Station	...	...	...	17	135
Medical College	10,235 §	...	...	120	18
Total	176,989	231,173	17,872	1,853	1,014
Total recorded use in all libraries					
427,887					

*Law and Aeronautical Laboratory not included as these libraries keep no circulation statistics.

**Includes Reserve and Business circulation in McGraw Hall.

†Incomplete returns because of lack of records in departmental libraries.

‡Covers period March 1-June 30, 1948, only.

§Figure includes reserve and non-reserve circulation.

<i>Expenditures</i>	<i>Salaries</i>	<i>Wages</i>	<i>Books Periodicals, Binding</i>	<i>Miscel- laneous</i>
University Library	129,478	22,536	94,264 *	19,011 **
Departmental Libraries	4,980	1,314	1,034 †	22
Collection of Regional History	4,680	2,491	584	2,424
Architecture	4,200	578	3,034	426
Business	...	...	2,345	...
Engineering	3,250	1,665	1,518	897
Law	13,550	...	10,000	1,228
Agriculture and Departments	45,242	742	20,083	4,764
Home Economics	13,635	1,578	4,983	629
Industrial & Labor Relations	27,043	7,357	22,592	2,917
Veterinary	4,450	175	2,802	1,115
Geneva Experiment Station	2,900	...	2,226	41
Medical College	7,730	...	7,467	441
Aeronautical Laboratory	...	§	...	...
Total	261,138	38,436	172,932	33,915
Total Expenditures for Library purposes				
\$506,421				

Throughout this report there is evidence of the need for a continued vigorous attack on the problems of the libraries of the University. The objectives are clear, inescapable, and imperative: 1. an adequate library building for the General Library and suitable library buildings or library quarters for college, school, and departmental libraries; 2. an enlarged and strengthened library staff; 3. substantially increased book funds for all the libraries; 4. a unified library system providing top quality library service to the entire University Community.

Some progress toward these objectives has been achieved in the past year. The progress and the beginnings that have been made toward the realization of these objectives, may be ascribed to the spirit of cooperation and mutual assistance in which the libraries have been fortunate enough to operate. Without generous cooperation on the part of those engaged in the daily operation of the libraries and the administrative officers responsible for them, the objectives cannot be attained.

*Does not include book funds expended for the Architecture, Business, Engineering, and Veterinary libraries.

**Does not include \$17,173 for bookstacks and installation.

†Physics Library only. Book funds for other departmental libraries included in University Library figures.

‡Salaries and wages included in University Library figures.

§Information not available.

The Library Board has far exceeded its schedule of monthly meetings and has met frequently to deal with special problems and to engage in special conferences. All major problems of the libraries have been presented to the Board for consideration and decision. I wish to express my sincere thanks to the members of the Board for their unflinching interest in the welfare of the libraries and their steady support of the program that is being developed.

The members of the library staff have given repeated evidences of their loyalty, their adaptability, and their willingness to put forward their best efforts for the improvement and expansion of the library services. The University Library staff, especially, has had a series of new and difficult problems to meet, and, on the whole, has succeeded in dealing with them effectively. I wish to record my gratitude to the members of the library staff for their assistance and support throughout a year which brought all of us many opportunities.

Finally, Sir, I wish to express my thanks to you for the advice and the encouragement which you have so generously given, and for the confidence which you have shown by your consistent support of recommendations designed to improve the library services and facilities of the University.

STEPHEN A. MCCARTHY,
Director of the University Library.

APPENDIX V

REPORT OF THE CURATOR, COLLECTION OF REGIONAL HISTORY

To the President of the University:

SIR: I have the honor to present the report of the Collection of Regional History for the year 1947-1948.

During the past year, the Collection of Regional History made 121 accessions, exclusive of newspapers and books. A number of the most significant acquisitions resulted from a specific program to locate and collect manuscripts relating to particular subjects with a view to forming units of research material which might attract the attention of students and scholars. Such a program is necessarily a long-range one, and must be attacked from different angles to insure any real success. First, the subject matter must be decided. Occasionally valid subjects appear as the result of discoveries of information in letters or account books, or a new acquisition may prove to be the nucleus of a new unit. Generally, however, the subjects appear as the result of research into published works and studies on the history of New York which reveal the gaps in our knowledge as well as the problems which need re-evaluation. The actual building of a unit depends upon the locating of pertinent papers and the persuading of people to part with them. Not all leads end in the location of the desired material. Too frequently, there is the discouraging news of a recent death and housecleaning, or of a remodeling of an office or factory and the consequent discarding of papers accumulated over a long period. If the cleaning antedated the visit by but a few days, we may hopefully pursue the scrap paper to a mill only to end by gazing disconsolately at a mass of pulp. Nor are people always persuaded to donate their papers immediately or to part with them all at one time. Illness or death within a family, the pressure of business, a suspicion that family skeletons may rattle into the present, the question of the practical business man as to the value of revealing past history, a sentimental attachment to family papers, differences of opinion within a family, a desire on the part of a prospective donor to hold the papers until the time, usually nebulous, when he shall have written a history of the family or of the community; these are some of the factors which often make collecting a slow and cautious process. They necessitate frequent visits to some individuals, families, or communities; at times may demand that an inventory taking several days be made on the spot to secure a release of the papers; and may even require that a talk be given before a local historical group.

In December, 1945, the nucleus of a unit was discovered in Holland Land Com-

pany records newly acquired from Ellicottville. The books were used by the Company from 1803 to 1835, and from 1835 to 1863 by Nicholas Devereux of Utica who with other men of capital from that vicinity purchased a half million acres of land and mortgages from the Company. The Devereux entries proved highly interesting, for while Paul Evans had made an excellent study of the land, mortgage, and credit business of the Holland Land Company, no one had collected any substantial amount of evidence for a study of the same business in the same region following the sale of its interests by the Company in 1835. As the results of considerable search, the Collection now has the most substantial unit in existence of source material for such a history (1835-1900) in Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Monroe, Niagara, Wyoming, and other western counties.

Mr. Ramsey Devereux and Mr. Warnick Kernan of Utica contributed the accounts of Nicholas Devereux and company (1801-1886) in several separate collections. Acquired also were the related papers of Senator Francis Kernan and John Devereux who as executors of the Devereux estate made the final disposal of the lands. The letters (1858-1865) of John Devereux of the Ellicottville Land Office throw light on the agricultural, social, industrial, political, and religious history, and on the history of transportation of the western region as well as on the land business. The related sets of letters (1800-1919) between the Devereux, Kernan, and White families of Utica, the Pierrepont family of Pierrepont Manor, and the Clapp and Butler families of Oxford, Chenango County, contain much material relevant to this particular unit.

The City Bank Farmers Trust of New York City contributed correspondence, accounts, surveys, and other papers (1832-1942) relating to the investments of millions of dollars by the Farmers Loan and Trust Company in mortgages and land purchased from the Holland Land Company. These records include the correspondence and accounts of Herman Redfield, the agent of the Batavia Office. Nor is this collection isolated in content from the Devereux-Kernan collections. Again we find Utica men, in the persons of Horatio Seymour and his father, interested in the western lands of New York. The latter was president of the Farmers Loan and Trust. Unfortunately, these records can never be complete, for the City Bank Farmers Trust recently cremated a considerable amount of material worthless for its business but invaluable for this particular unit. Other acquisitions, including records from the Pulteney Estate and the Morris Reserve, offer additional evidence for the land, mortgage, and credit business as well as for other aspects of the history of western New York.

In 1945, Regional History acquired the William Pierrepont Collection (1729-1938) which threw much light on the economic and social development of this and other regions. But the multiplicity of individuals and interests concerned made the locating and collecting of additional material necessary. During the past year, we acquired, largely through the generosity of Mrs. Hugh White of Utica, a substantial set (1814-1835) of accounts, correspondence, and maps bearing on the career of Canvass White, one of the country's earliest and greatest of engineers; a long file of correspondence (1819-1888) relating to the Honorable Hugh White and his political and social activities in Washington; surveys and field notes (1790-1805) by Benjamin Wright for some 2,000,000 acres of land in northeastern New York, other papers relating to the disposal of these lands by William Constable, Hezekiah Pierrepont, William Constable Pierrepont, and Hugh White; additional account books, correspondence, and papers concerning the economic development of, and the cultural, social, and religious life on Pierrepont Manor; an enlightening file of correspondence for the New York Mills (1909-1913) which included a complete set of letters or directives from C. A. Braman of A. D. Juilliard & Co. at a time when the mills were passing from the control of small to large corporate business; and other sets of papers which both complemented and supplemented the original White collection.

Acquired through purchase, the papers of the Seymour family of Utica relate to the activities of Henry, John, and Horatio Seymour, and to the history, management, and disposal of Bleeker lands by the latter. The affinity between interests in land, transportation, and politics is illustrated by the papers of Governor Horatio Seymour as well as by the letters of Senator Francis Kernan and the Honorable Hugh White.

When correlated, the papers of the Butler, Clapp, Constable, Devereux, Kernan, Seymour, Walcott, and White families reveal the cohesive unity of an expanding group of related families, all centering in Utica, and the influence wielded by that group in the development of New York and other regions during the nineteenth century. These collections furnish research material not only for the economist and historian, but for the sociologist as well.

Papers acquired this year which pertain primarily to political life include those of Diedrich Willers who was private secretary to Governor Seymour, deputy-secretary and secretary of New York State, an assemblyman, and always an ardent worker in the Democratic Party. Much light is cast on political patronage in the state by letters to Willers. Among papers acquired relating to slavery and the Civil War are two significant letters from Benjamin Lundy to a Quaker in Lockport reporting on his attempts to establish a free labor colony in Mexico.

A noteworthy collection (1849-1930) dealing largely with the history of transportation was contributed by Mr. Alexander Diven of Elmira. Associated with the Pennsylvania Railroad, the Northern Central Railway, the Cayuga Railroad, and a number of other companies, the Divens for three generations were in close contact with key railroad men. Their correspondence and accounts offer much evidence on capital investment, consolidation, and other aspects of railroad history.

Donated by Mr. Cameron B. Waterman of Detroit, and Mr. Henry M. Hille of Bath, the additional Davenport papers (1849-1905) include account books, agreements, letters, and other documents which cover in detail the land business and industrial interests of John and the Honorable Ira Davenport of Bath. These papers together with the Davenport papers acquired last year provide a unit which contains a tremendous fund of information on the farm mortgage problem in New York and in nine states of the Middle West.

The aims of activities of the Collection were brought before the public during the past year in a number of programs and functions which by emphasizing items of human interest to be found in manuscripts and some entertaining aspects of collecting appealed to people of varied interests. Two radio programs featured the Collection; the first, a five-minute question and answer broadcast on the Columbia Country Journal, was suggested and handled by Mr. Louis W. Kaiser; the second, a fifteen-minute discussion over the WGY Homemakers' Council Program, was prepared and handled by Mrs. Rubenfeld at the suggestion of Professor Orrilla Wright. Three talks by the curator before local historical societies encouraged relationships of good will and co-operation between the societies and the Collection. Four exhibitions of manuscripts, one in the Main Library, two on the Agricultural Campus during Farm and Home Week, and one in the Collection's quarters during Alumni Week, attracted favorable comment and new manuscripts. A tea and an exhibition held last November brought people from the campus and town pleasantly together in discussion over actual manuscripts, and resulted in many expressions of interest and suggestions as to the location of manuscript materials.

During the past six months, efforts were made to facilitate the consolidation of the Collection of Regional History with the Cornell University Library. The corporation report file, an orphan which Regional History had kept in existence through a temporary adoption, was taken over by Library of Business and Public Administration. The Acquisitions Department is accepting the pamphlet file for cataloguing, including the ephemeral advertising and publicity material which a few years after its issue and usual destruction proves of interest and value to researchers in varied fields. For a number of years the University Library has been receiving separate and unorganized gifts of Ezra Cornell papers. During the past months and in co-operation with the Library, we have been amalgamating, arranging, and describing these papers, a task of particular importance in view of the relative nearness of the centennial anniversary of Cornell University. All these activities, by furthering Regional History's purpose of gathering source material and making it increasingly available to students and scholars, promise substantial benefits for our association with a parent body.

EDITH M. FOX,
Curator, Collection of Regional History.

APPENDIX VI

REPORT OF THE DEAN OF THE COLLEGE OF ARTS
AND SCIENCES

To the President of the University:

SIR: I have the honor to submit my report as Dean of the College of Arts and Sciences for the academic year 1947-1948. This will also be my last report as Dean and I hope therefore that I may have the privilege of making some comments of a general nature in addition to the more descriptive comments appropriate to an annual report.

The College has in general maintained its strength throughout the year and still further developed that strength at certain important points. Perhaps the most significant general remark that can be made about the progress of the College is implicit in the following quotation from the report of the chairman of the Department of Physics:

In spite of our difficulties, it speaks well that we have been able to hold our original staff together in spite of the fact that many are continually receiving offers to go elsewhere. The administration is to be congratulated for supporting the recommendations from the Department in these matters. The University can feel proud of the fact that such a competent Physics staff has been kept together and somewhat increased in the face of terrific pressure from outside by other universities and by industry.

This comment applies to the College as a whole and is a tribute to the success of the University in maintaining an excellent staff in the face of a great deal of competition. Like other colleges in the country, the College of Arts and Sciences has endured the influence of rising costs in many ways. Salaries, equipment, replacements, and new undertakings have all felt the pressure of inflation in spite of the very considerable efforts made by the University to meet the problem. The success of the University in financing a second general raise in salary has done much to maintain the morale of the faculty of the college.

The College of Arts and Sciences has borne the impact of another form of post-war inflation. This consists of the increase in the number of students taught by the College. While the College had an undergraduate enrollment during the past academic year of nearly 2400 students, it had an additional enrollment of virtually 1875 fulltime students from other schools and colleges on the campus. This figure was arrived at by taking the number of hours of instruction given in the College to out-of-college students and dividing this figure by 15 which is the normal fulltime load of a regular student. It can be said therefore that the total virtual enrollment of the College of Arts and Sciences, excluding graduate students, was 4,275 students. Together with graduate students, this figure falls not far short of 5,000. During the year some publicity was given to the favorable faculty-student relationship which obtains at Cornell. It would be unrealistic not to point out that the favorable student-faculty relationship in the University as a whole is not reflected in the load borne by the College of Arts and Sciences. This load is very much greater, being in the ratio of approximately 21 students per fulltime instructor, whereas in the university as a whole the figure given stands at 5.8 to 1.

These figures represent still another way of measuring the central place of the College of Arts and Sciences in the total responsibilities of the University. As Dean of the College, it gives me pleasure to report that these proportions have come to be increasingly recognized by the Administration of the University. At the same time a number of the departments which carry important burdens in accessory instruction insist that further facilities both in staff and equipment will be necessary if the present heavy load continues. It is revealing to note that in departments like English, Physics, and Chemistry practically half of the total instruction is given to out-of-college students.

The College of Arts and Sciences has accepted its accessory responsibilities in the University as a whole and, indeed, regards them as an integral and important function. It is on this account that the College continues to look with some concern on the tendency occasionally manifested on the part of other schools and colleges to include in their curriculum subjects of instruction which are traditionally part of the fundamental responsibility of a college of arts and sciences. This tendency is centrifugal in nature and can only, if continued, accentuate the dispersed character of the University as a whole. I feel strongly that university policy should emphasize the assimilative and integrating tendencies, especially in view of the great competition which the University is bound to endure from other institutions within and without the state in the coming years.

During the past year the synchrotron building was completed. This building may be taken as an outward symbol of the strong progress made throughout the year by the scientific departments. This progress was characteristic not merely of the major departments such as physics and chemistry, but also happily characteristic of departments such as geology, zoology, and astronomy. The impending completion of the Laboratory of Nuclear Studies will be the culmination of a major policy decision reached a number of years ago. It is now clear that Cornell has not merely held her own in the strongest advances in modern science, but has also introduced to the campus a force which will radiate into the careers of a large number of related departments, both within the College and in the Colleges of Agriculture and Engineering.

It has been noteworthy to what extent the College has been successful in the past year in building as it were a bridge between its own activities and national spheres of responsibility and action. I wish to make the point that in the modern world no educational institution, and least of all a college of arts and sciences, can absolve itself of its responsibilities without recognizing that more and more is it incumbent upon scholarship to make its thought and research accessible to those men and agencies in the national life who have the obligation of steering the nation through what can only be termed a stupendous crisis. It is most encouraging therefore to be able to read in the report of the chairman of the Department of Far Eastern Studies that a number of its graduates have undertaken duties in the vital field of Far Eastern relations. The Department of Far Eastern Studies has established an especially fruitful relationship with the State Department. Three foreign service officers were assigned by the Department of State to the Far Eastern area program during the past year. In the coming year additional officers will be assigned to the Russian program in the University. Further illustrations of this essential trend in modern educational practice were manifested in such departments as geology, mathematics, and sociology and anthropology. It is sometimes said that close relations between the University and the outside world can be harmful to fundamental research. With this fear I have little sympathy since it is too easy a cloak for excusing a lack of realistic and constructive contact with the community of which a university is after all an essential part. The illustrations which I have given are merely representative of a number of similar developments of which the College is properly proud.

It may be something of a paradox to express some concern in this paragraph about the lack of a strong corporate feeling in the College. This remark is not made as a specific criticism of the College but rather as a criticism of strong trends in modern education from which the College of Arts and Sciences has not been entirely free. The College of Arts and Sciences is by its very complex nature unusually subject to dispersive and atomistic influences. It is sometimes difficult to recognize that the full impact of such an institution can be achieved only if there is a strong and continuous consciousness on the part of the entire faculty of the intellectual bond which must hold them together. It is inescapably true that the responses to the challenges and menaces that a modern society must endure can come best from a community which is devoted to fundamental research in the sciences, to equally fundamental speculation in the field of human relations. Men in the social sciences and in the humanities have an especial responsibility to undertake the work of clarification and explanation for which they are equipped. This great responsibility can be assumed only as a collective burden by a faculty which recognizes its important place in a national culture. A faculty must recognize that education is a

form of statesmanship, that scholarship at its best is a form of creation, and that a university is at the same time a fountainhead of knowledge, morality, and ideals.

Although much has been done in the College of Arts and Sciences, much more remains to be done. The faculty is still somewhat open to the criticism of atomism in teaching and traditionalism in thought. Its increase in strength and authority will depend upon the ability of the faculty to recognize that its thought and research must accept an even more immediate and comprehensive responsibility for the great issues which mark our age of transition. This is not a plea for an interest in current events but it is rather a plea that the great resources of which this college is capable be brought more resolutely to bear upon the great moral, material, and psychological problems which have been engendered by changes in technology and international relations. It is hoped that the faculty will come increasingly to appreciate the need for greater initiative on its part. Poor attendance at faculty meetings, lack of initiative in important college committees, complacency about the curriculum, are outward signs of a still insufficient comprehension of the challenges which history has placed upon the shoulders of great educational institutions. There are periods in education which must be marked by innovation, enterprise, experiment and even intelligent foresight. During the postwar period the College has certainly not fallen behind other institutions in this regard and yet much must still be done.

On a more material level I would like to express the hope that it may be possible in the near future to pay more attention to the physical plant of the College of Arts and Sciences. The degree of deterioration in many of the buildings is startling. The complaints from departments and members of the faculty are frequently strong and desperate. I have satisfied myself time and time again that the College has not been well served by the Department of Buildings and Grounds. It is certain that the University has already incurred future expenses out of proportion to the amounts that would have been necessary had timely care and scrutiny been employed by the Department of Buildings and Grounds. There are parts of the buildings in the College which have not been touched in thirty years. I would seriously recommend that a closer supervision of the buildings be undertaken by the Department of Buildings and Grounds. The present policy of having to solicit and negotiate for individual items simply means that the buildings as a whole continue to stand neglected. I would not have set these comments down on paper were it not for the continuous and severe character of remarks made by practically every department of the College.

Since this is my last report as Dean of the College, I feel that I have had every reason to congratulate myself on the support of my colleagues and on the firm fortunes of the College of which I have had the honor to be the dean. I feel additionally recompensed for the work of the past three years by the appointment of my successor, Dean Leonard S. Cottrell, in whose intellectual powers and administrative skill I have the very highest confidence. May I finally, not as a formality but in all sincerity, express my deep appreciation to you as President of the University for much material support and essential moral support.

C. W. DE KIEWIET,
Dean of the College of Arts and Sciences.

APPENDIX VII

REPORT OF THE DEAN OF THE COLLEGE OF ARCHITECTURE

To the President of the University:

SIR: I have the honor to present the report of the College of Architecture for the academic year 1947-1948.

ENROLLMENT

The enrollment in the College increased slightly in 1947-1948. A total of 217 undergraduates and 15 graduate students were enrolled during the fall term.

Continued pressure from well qualified applicants has not lessened the difficult admissions problem. The College's physical plant and staff are factors which severely limit the size of the freshman class in architecture. Approximately 700 applications were reviewed and it was possible to accept an entering class of only 62. A few additional students with advanced standing were able to begin work in summer. The calibre of the students we are able to accept is, we believe, unusually high.

Veterans in the College last fall numbered 178, but the ex-GI formed a much smaller proportion of the entering class. With fewer veterans applying it is now possible to admit a larger number of secondary school candidates. Many applicants, however, now offer advanced standing from other colleges and universities; of 62 new undergraduates, seven entered in the fall with bachelor's degrees and 24 others had completed some college training.

As in previous years, the College has drawn its students from many states and foreign lands. New undergraduates have come from fifteen states, Puerto Rico, and the territory of Hawaii. Students are enrolled from nine foreign countries: China, Colombia, Great Britain, India, Mexico, Norway, Panama, Peru, and Turkey.

The following table is a summary of enrollment for the two terms of the academic year 1947-1948 and the summer term of 1947:

FALL TERM, 1947

Undergraduates.....	217
Architecture.....	173
Fine Arts.....	39
Landscape Architecture.....	5
Graduates.....	15
Architecture.....	5
Regional and City Planning.....	8
Fine Arts.....	2
Total.....	232

SPRING TERM, 1948

Undergraduates.....	206
Architecture.....	162
Landscape Architecture.....	4
Fine Arts.....	40
Graduates.....	16
Architecture.....	7
Regional and City Planning.....	7
Fine Arts.....	2
Total.....	222

COLLEGE OF ARCHITECTURE

73

SUMMER TERM, 1947

Undergraduates.....	55
Architecture.....	50
Fine Arts.....	5
Graduates.....	3
Regional and City Planning.....	3
Total.....	58

RECOMMENDED FOR DEGREES

October, 1947

Bachelor of Architecture.....	11
Bachelor of Fine Arts.....	1
Master of Regional Planning.....	3

January, 1948

Bachelor of Architecture.....	9
Bachelor of Landscape Architecture.....	1
Master of Regional Planning.....	3

June, 1948

Bachelor of Architecture.....	6
Bachelor of Fine Arts.....	5
Master of Architecture.....	3
Master of Regional Planning.....	1

SUMMER TERM

The College conducted an eleven-week summer term during the summer of 1947. A limited number of courses were offered. The registration for the summer term was 58.

FACULTY

Dean Clarke continued on partial leave of absence throughout the year.

Stuart M. Barnette was appointed Associate Professor of Architecture. Mr. Barnette received his bachelor's degree in architecture at Massachusetts Institute of Technology and holds the Diplome in Architecture from the Ecole des Beaux Arts Americaine in France. He was formerly Chief of the Historic Building Section, National Park Service. During the war Mr. Barnette served as a commander in the Navy; more recently he was a professor of architecture at Alabama Polytechnic Institute.

Kenneth Evett was appointed Instructor in Fine Arts in February, 1948. Mr. Evett is a graduate of Colorado State College and holds an M.A. from Colorado College. At the Colorado Springs Fine Arts Center he studied painting under Boardman Robinson, George Biddle, and Henry Varnum Poor. He has executed a number of murals for the Post Office Department.

John S. Myers was appointed Instructor in Architecture in the fall of 1947, serving as a member of the Design Staff. Mr. Myers holds a bachelor's degree from the Graduate School of Design at Harvard University and in the war was a pilot, with the rank of captain, in the Army Air Forces. He has worked with leading architectural firms in California and Massachusetts.

John W. Reps was appointed Lecturer in City Planning in February, 1948; during the spring term he has conducted the seminar in Zoning Principles and Practice. A graduate of Dartmouth College, Mr. Reps took his Master in Regional Planning degree at Cornell in 1947 and subsequently studied civic design in England at Liverpool University. He is at present executive secretary of the Broome County Planning Commission, Binghamton, New York.

Vincent C. Cerasi and James S. Ayers, both graduates in landscape architecture of this College, were appointed Visiting Critics in Site Planning during the fall term.

George F. Chisholm, Instructor in Fine Arts, resigned as of June 30, 1948.

Kenneth L. Washburn, Associate Professor of Fine Arts, was on sabbatical leave during the spring term, painting and studying in Haiti.

COUNCIL OF THE COLLEGE

Trustee Horace C. Flanigan, C.E. '12, of New York, was elected to the College Council to fill the expired term of Trustee Thomas I. S. Boak, M.E. '14, of New Haven, Connecticut. The other members of the Council are Trustee Victor Butterfield, A.B. '27, A.M. '28, of Middletown, Connecticut; Nathaniel A. Owings, B.Arch. '27, of Chicago; Michael Rapuano, B.L.A. '27, of New York; Professor Hubert E. Baxter; Professor Thomas W. Mackesey; and the Dean, ex-officio.

FELLOWSHIPS

The following awards of fellowships were made from the Robert James Eidlitz Fellowship fund for travel and advanced study:

Eric Quell, B.Arch. '47, Forest Hills, N. Y., who will use his award for advanced study in design at the Eidgenoessische Technische Hochschule in Zurich, Switzerland. Mr. Quell has a special interest in civic and cultural buildings such as museums, auditoriums, and libraries.

Vincent Moscarella, B.Arch. '47, Brooklyn, N. Y., will study recent planning and housing techniques in the reconstruction of devastated areas in Italy. Mr. Moscarella plans to register as a student in the Faculty of Architecture, University of Rome.

John J. Wallace, B.Arch. '48, Middletown, N. Y., who will travel to Sweden for graduate work in architectural design at the Royal Academy of Art in Stockholm.

Vincent C. Cerasi, B.L.A. '36, was awarded the fellowship in landscape architecture of the American Academy in Rome and will travel to Rome for two years of research at the Academy.

LIBRARY

The six hundred volumes added to the Library during the year serve as a yardstick to measure its increasing usefulness for architects, painters, sculptors, and city planners alike. Badly in need of additional stack and reading room space, its many activities are conducted in a compact and efficient area on the third floor of White Hall. New fluorescent lights were installed in two of the rooms. Older portions of the collection have been recatalogued to make it a unified whole.

With many new lecture courses being offered in the College, the lantern slide collection is used intensively and an additional assistant to care for this department is contemplated for next year. Over 800 new slides were made and filed in a collection that now numbers more than 44,000. Among these was a group of 200 slides on contemporary architecture from the Museum of Modern Art.

Keeping in touch with current progress in architecture and the arts throughout the world, the Library added a number of new periodicals and now receives currently 137 journals and bulletins. Post-war European sources now offer valuable material; among the new architecture periodicals are four from France, two from Norway, and one each from Denmark, Finland, Switzerland, and Sweden.

A special effort has been made to build up the city planning collection, which ranks with the best of its kind. Sixty English planning reports were added, making a total of 1,350 bound volumes. Over three thousand pamphlets are kept in filing cases in Morse Hall, where new steel map cases to hold planning survey maps are to be installed shortly.

Heading the list of gifts was a group of more than one hundred volumes relating to the graphic arts, together with numerous catalogues of print auction sales, a complete set of the *Print Collector's Quarterly*, and other materials, the bequest of William P. Chapman and intended to serve as reference material for the Chapman Print Collection.

GILMORE D. CLARKE,
Dean of the College of Architecture.
By THOMAS W. MACKESY,
Assistant Dean.

APPENDIX VIII

REPORT OF THE DEAN OF THE COLLEGE OF ENGINEERING

To the President of the University:

SIR: I have the honor to present a report upon the work of the College of Engineering for the academic year 1947-1948.

Once again the large enrollment has been a dominant factor in the operations of the College. The fall term enrollment of 2,465 exceeded the record enrollment of 2,401 for 1946-1947. As in the previous year, the disruption of normal educational schedules in the war period was reflected in the unusually high percentage of students above the freshman level in the enrollment. The relatively greater demand on our staff in this circumstance, plus the continuing problems of transition from the four-year to five-year curricula posed unusual organizational problems throughout the College, but it is well to report that in no instance did these matters react to the detriment of our educational effort.

ENROLLMENT

The following tables give the enrollments in the schools of the College since 1939, and the freshman enrollments in the same period.

School	FIRST TERM								
	1939	1940	1941	1942	1943	1944	1945	1946	1947
C. E.	189	214	227	241	233	231	164	432	449
E. E.	195	202	193	222	301	367	246	569	577
M. E.	613	663	760	800	803	689	380	933	983
Chem. E.	242	277	337	353	310	170	83	438	392
E. Physics. ....	...	...	...	...	...	...	...	17	45
Aero E. (Grad) ...	...	...	...	...	...	...	...	12	19
Totals.	1239	1356	1517	1616	1647	1457	873	2401	2465

FRESHMAN REGISTRATION

First Term								
1939	1940	1941	1942	1943	1944	1945	1946	1947
440	471	560	645	518	509	201	408	424

THE CURRICULA

Development of details of the five-year curricula was carried out in all areas of the College. Although some groups will continue in the four-year program through 1950, operation of the new curricula should proceed henceforth with relatively little complication.

It is pertinent to note that the whole matter of strengthening the technological content of engineering curricula while at the same time increasing the scope of liberal education in engineering training has been a major subject of discussion in both academic and professional circles this past year. There can be no question but that the pattern of engineering education will be molded to new forms in an endeavor to meet this double objective. It seems proper that Cornell, with a long tradition of pioneering in engineering, should lead in a positive and fundamental step towards the development of a progressive concept of engineering education for broad professional and personal responsibility.

During the past year the initial phases of the Industrial Cooperative Plan were activated. Both the Philco Corporation and the General Electric Company are

participating in this program which is available to selected students in mechanical and electrical engineering. The first special summer session for this group is being given this summer. Regular sessions, summer sessions, and work periods are scheduled so as to enable these students to graduate with their classes.

DEPARTMENTAL ORGANIZATION

As a step towards increased effectiveness in the basic engineering sciences, the work in mechanics has been consolidated in a single Department of Mechanics, under Professor D. F. Gunder as Head. Beginning with the next academic year, this Department will serve all of the College in this field, at both the undergraduate and graduate levels. It is expected that this new association of all the members of the staff interested in mechanics, plus continued association with related fields in both the College of Engineering and the College of Arts and Sciences, will stimulate growth in this area to the greatest extent.

A similar plan for a Department of Engineering Materials has been developed and will be in effect in the next academic year.

BARD PROFESSORSHIP IN METALLURGICAL ENGINEERING

On November 7, 1947 the Francis Norwood Bard Professorship of Metallurgical Engineering was established under a generous endowment provided by Mr. Bard (M.E. '04). Professor Peter E. Kyle was named the first holder of the Professorship.

The program in metallurgical engineering is being formulated with intentional deliberateness. The benefits of this endowment, and such special support as that offered by the Foundry Educational Foundation should do much to bring the program, though new, to a position of recognized eminence.

THE STAFF

A number of important additions to the staff have been made during the past year, with resultant strengthening of both the academic and research activities of the College. Despite the demands of a large enrollment and curricula changes, the staff as a whole is at an especially high level of interest and activity.

C.E. DIRECTORSHIP

The School of Civil Engineering suffered the death of Director William Lindsay Malcolm on January 18, 1948. Professor Carl Crandall was appointed acting director pending a permanent appointment. A careful review of a number of candidates was carried out in the following months, resulting finally in the recommendation of Dr. N. A. Christensen, dean of engineering at Colorado State College, for appointment as director. The Board of Trustees has made this appointment.

FACILITIES

During the year, additional areas were completed for the use of the College. Temporary Building No. 1, on Forest Home Road, has been assigned in part to the Graduate School of Aeronautical Engineering and in part to the School of Civil Engineering. Temporary Building No. 3, also on Forest Home Road, has been assigned to the Sibley School of Mechanical Engineering and is being used for the installation of some of the newly acquired machine tools.

At the East Hill Airport, a temporary building of some 20,000 square feet has been completed for the Airplane Engine Laboratory. A number of engines of various types are now housed in the building, although installation is not yet complete.

A small building for the Microwave Astronomy project was erected at the eastern edge of the airport. This is in operation, but additional work on antenna mountings and other installations is still proceeding.

Unfortunately, our advance in the matter of facilities suffered a serious setback in the loss of the High Voltage Laboratory by fire on the night of February 12. The Laboratory was just regaining the momentum that had been necessarily checked during the war, and showed promise of pioneering in new developments in high voltage transmission—a field of vital importance in this country and one that

has been relatively neglected. We hope that it will not be necessary to abandon our activities in this field.

Substantial additions to equipment were made during the year, mostly from available surplus property. A major installation was the new large testing machine of 400,000-pound capacity which was installed in Lincoln Hall. This is especially useful in some of our current research work, and will be readily adaptable to a variety of work in the proposed Materials Testing Laboratory.

The equipment acquired in the last two years has reversed the trend towards obsolescence in many areas, but a continuing development of our facilities remains a prime objective.

RESEARCH

The research activities of the College were at a high level during the year, with projects valued at about a half-million dollars under way. For the most part these projects were of a basic character and represented a broad variety of problems. It is our intention that the stimulating effects of research shall filter throughout the educational operations of the College and, towards this end, it has been our policy to have members of the teaching staff participate in research as widely as possible.

Active projects last year included the following (some of which were carried into the current year): Microwave Astronomy; Wide-Range Oscilloscope; Millimeter Electromagnetic Waves; Fatigue Tests of Ship Welds; Investigation of Longitudinal Stress in Concrete Reinforcement; Investigation of Light-Gage Steel Structural Members; Beach Accessibility and Trafficability; Soil Solidification Research; Aggregates for Highway Pavements; Aerial Photographic Study of Soil Patterns; Dynamic Elastic Properties of Matter; Studies in Propagation of Expansion and Compression Waves; Supercritical Mixed Flow about Airfoil Profiles.

ENGINEERING COLLEGE COUNCIL

A two-day meeting of the Engineering College Council was held in Ithaca, May 24-25, 1948. This was the most extensive meeting of the Council since the pre-war period.

The first day was devoted to individual discussions with directors and staff members, and examination of College facilities. A general meeting was held on the second day at which time the broad objectives of engineering education, as well as the details of educational operations in the College, were discussed with considerable thoroughness.

The judgment of the Council is especially valuable in that it reflects the attitude of industry and the profession toward the work of the College, but from the deliberate perspective of the tradition and purpose of education at Cornell rather than from the narrow viewpoint of expediency so often inherent in external evaluations.

In review, the Council endorsed the philosophy underlying the development of the Five-Year Curricula in its consistent emphasis on a strong fundamental training for all engineers in the basic sciences and technologies, in parallel with a broadened stem of liberal studies. It was agreed that over-development of the so-called practical or applied courses at the expense of basic training deprived the student of the fundamental background essential to growth in the profession. This expression, coming as it did from men who are both engineers and employers of engineers, is representative of an increasingly definite attitude toward this matter in the profession, and is of significant support in our long-range planning.

The Council also approved the growth of research activities in the College and recommended continuing advancement in this direction. It was felt that the major deterrent to growth in research, and in fact to general development, was in the need for more modern facilities and adequate space in certain areas.

OTHER ACTIVITIES

As in the previous year, the College received several requests from industry and from the Cornell Aeronautical Laboratory for extramural courses in the Buffalo area. It was possible to set up courses in Alternating-Current Machinery, Engineering Physics, and Production Control on this basis, under instruction of staff members from Ithaca.

During this period the Graduate School of Aeronautical Engineering at Ithaca and the Cornell Aeronautical Laboratory at Buffalo continued a close relationship in various activities involving both faculty and students and the Laboratory staff.

Arrangement for participation in the development of the Engineering Department at the Brookhaven Laboratories was also established during the year. The plan intends that, under a system of rotation, members of our staff (a small group at any one time) will work at Brookhaven for varying periods on a leave basis. It is expected that not only will this arrangement provide the Laboratory with engineering assistance, but that it will react with great benefit to the College.

S. C. HOLLISTER,
Dean of the College of Engineering.

APPENDIX IX

REPORT OF THE DEAN OF THE LAW SCHOOL

To the President of the University:

SIR: I have the honor to present the report of the Law School for the academic year 1947-1948.

CURRICULAR CHANGES

During this sixty-first year of the Law School, the following further developments in educational policy are noteworthy:

1. Perhaps the most interesting and novel development of the year is the faculty's announcement that next September a new program of study in law and international relations will become available for a limited number of law students. This has been planned in response to the lively interest which the present-day law student has in international affairs and also in recognition of the need of a wider understanding among future members of the bar of the political, economic, geographic and security factors which engender international problems and influence their solution.

The new program, which will lead to the degree of "LL.B. with Specialization in International Affairs," embraces a study of seventy-two hours in law and approximately eighteen hours in specially designed courses in international economics, politics and administration. To be eligible for selection to pursue this program, a law student must have done well in the full curriculum of law work that is required of all students in their first year. Thereafter, the selected students will pursue ten to eleven hours of law and approximately five hours of international topics in each term of the second and third years.

In developing this program, we have the interested and generous cooperation of Deans de Kiewiet and O'Leary and of Professors Briggs, Fox, Kahn and Einaudi of the College of Arts and Sciences and of Professor Schaaf of the School of Business and Public Administration. These men will direct the studies in international topics in a manner appropriate for graduate students.

Included for students admitted to this new program will be the courses on International Law given by Professor Robinson of our own faculty and a course on Comparative Law which is being newly added to our curriculum next fall to supply an integral part of the new program and which will be given by Professor Schlesinger whose appointment to the law faculty and whose unique qualifications in this field are recorded later in this report.

One-third of the class which has just completed its first year have signified their desire to enroll for the new program next September. From these, a selection of those to be admitted will be made upon the basis of their academic standing, their demonstrated interest and their qualifications as exhibited by their pre-legal training and experience.

It will be particularly fortunate for these students that the Myron Taylor Lectures on International Affairs, inspired and made possible by Honorable Myron C.

Taylor, LL.B. '94, will be given at Cornell next year. The discussions led by the eminent lecturers in this series will enrich their individual researches in the international field.

2. Professor Sutherland, as chairman, with Professors Farnham, Keefe, Willcox and Curtiss studied this year the advisability of reorganizing some of the commercial law courses, such as Sales, Negotiable Instruments, Security Transactions and Creditors' Rights. When these courses are given separately and as electives, as has been customary in American law schools, students may elect some, but not all of them. When given separately, there is inevitably a repetitive consideration of some principles common to many of these courses, such, for example, as the significance of negotiability as applied to bills of lading and warehouse receipts as well as to promissory notes, or the effect of statutes requiring recordation of instruments which qualify ownership, whether by way of mortgage, conditional sale or trust indenture. The separate treatment also necessitates repeated explanations of the commercial side of the business transaction which gives rise to the legal problems. A sale transaction is usually a complex arrangement wherein title is transferred at once or reserved for future transfer, evidence of credit extended to the buyer is taken and an effort is made to obtain security that will be adequate in the event of his insolvency. Even though not all sales are on credit and not all negotiable instruments are born of sales transactions, the conclusion has been reached that the frequency of the concurrence of the two and the commonness of legal principles now studied separately justify a well-planned merger of much of the material heretofore parcelled to these several courses, and that the result will be a more realistic and effective, as well as a time-saving method of presentation. Accordingly, Professors Sutherland and Willcox have been compiling a new set of cases and materials for a course which will be inaugurated next fall, given three hours a week throughout the year and will have the comprehensive title "Promises, Ownership, and Security in Commercial Transactions." This will replace the courses in Sales, Negotiable Instruments and Suretyship and will contain much of the material formerly included in Mortgages. The scope of the course will be extended with a further conservation of time by requiring the students to cover general principles and easily comprehended topics by text book reading, reserving only the more difficult topics for case book treatment and class room discussion.

3. The period for initiating first-year students into the study of law was extended from six to ten days. That period, being devoted to orientation to the exclusion of all other work, provided thirty class hours or the equivalent of a two-hour semester course. Professors Freeman, MacDonald, Sutherland and I, having collaborated for two years in presenting this introductory material, have, during the past year, been using our experience as a basis for reorganizing and amplifying a textbook which will be ready for distribution to the next entering class.

FACULTY CHANGES

Professor Herbert D. Laube, who was appointed to the faculty in 1925, retired, under the University statutes, as of the end of the academic year 1947-1948.

It was in 1925 that the faculty decided that Jurisprudence should be added to our curriculum, that it should not be reserved as a privileged study for candidates for advanced degrees only, but should be offered as a third-year elective for all candidates for the LL.B. degree.

With an A.B. from Wisconsin, an A.M. from Michigan, an LL.B. from Columbia and an S.J.D. from Harvard, with experience in practice and in law teaching and with the richness and inspiration of the instruction of Roscoe Pound in the field of Jurisprudence, Professor Laube was exceptionally qualified to fulfill our primary requirement of a teacher of Jurisprudence. Since 1925, he has directed the jurisprudential studies of every candidate for an advanced law degree and has served for many years as Director of Group H, the law division, of the Graduate School of the University. Annually he has attracted to his course in Jurisprudence not only a substantial number of third-year law students but also graduate students from other colleges of the University. In addition, he has regularly taught Wills and Quasi-Contracts, and, in some years, Sales, Mortgages, Suretyship, Partnership, Labor Law and Criminal Law. He has published numerous articles in legal periodicals.

cals, revised the third edition of Woodruff's Cases on Quasi-Contracts and recently compiled a case book on Decedents' Estates. As Professor Emeritus, he will remain in residence and continue his writing in Jurisprudence and Quasi-Contracts.

The course in Jurisprudence will be taken over by Professor Freeman who had years of experience in practice, who has both his LL.B. and his J.S.D. from Cornell and who was appointed to the faculty in 1945.

In considering the replacement of Professor Laube, we were again faced with the need of a teacher with special qualifications. We had long been eager to add Comparative Law to our list of course offerings. This desire reached the stage of critical importance when we were formulating the program leading to our LL.B. with Specialization in International Relations. We set out to find someone who had been trained in and who had practiced both the civil and the common law. Rudolf B. Schlesinger, who was appointed Assistant Professor of Law by the Board of Trustees at its meeting last May, has this unusual combination of training and experience. Between 1927 and 1933, he studied law at Geneva, Berlin and Munich, receiving the degree, Doctor Juris, Summa Cum Laude, from Munich. From 1933 to 1938, he had experience in practice in Munich. In 1939, he entered the Columbia Law School from which he graduated in 1942, having been editor-in-chief of the Columbia Law Review. After a year as law secretary to Chief Judge Lehman and another year as Law Clerk of the New York Court of Appeals, he became associated in 1944 with the firm of Milbank, Tweed, Hope and Hadley in New York City where his work has been chiefly in litigation. He will come from that office to Cornell in September. In addition to contributions to legal periodicals in the United States and abroad, he has published a monograph on "Protection of Goodwill under the German Law against Unfair Competition" (Munich, 1933); Articles in *Schweizerische Juristenzeitung*, 1934 and 1935, on "Systems of Foreign Exchange Control", and "Conflict of Laws in Connection with International Barter Deals." For the New York State Law Revision Commission, he supplied a study on "The Notary and the Formal Contract in Civil Law," which was published as an appendix to the Commission's research into the subject of the Seal and the Enforcement of Contracts without Consideration. In the fall, he will take over some of the regular courses in the curriculum as well as enrich it by adding instruction in Comparative Law.

Professor Freeman was promoted by the Board of Trustees in 1947 from Associate Professor to Professor, and Professors Larson, Morse, and Willcox received similar promotions in May 1948.

Four members of the staff have during the year declined offers, including deanships, from other leading law schools.

THE STUDENT BODY

As anticipated, the Law School had the largest enrollment in its history. Of the 375 students enrolled in September, 104 came from Cornell but ninety-five other institutions were represented. The first eight of these in order of representation were:

Hamilton	22	Harvard	10
Rochester	13	Colgate	9
Dartmouth	11	Princeton	8
Yale	11	New York Univ.	8

The average age of the student body was 27. 87% were veterans. 58% were married.

During the calendar year, a total of 134 students will be graduated. The 1948 summer session is being conducted for the benefit of the group finishing in February 1949, which will be the last class going through the School on an accelerated program.

The Law Student Association appointed a committee on law school policy, which, after polling student sentiment, submitted to the dean a report containing many helpful suggestions. Of particular interest was the almost unanimous endorsement of the third-year problem courses, about half the class suggesting that more than one of these should be required of every student. It was generally maintained that

problem work was so time-consuming that the faculty should grant more credit hours for each problem course.

The Phi Alpha Delta fraternity brought to the School, as speakers on international affairs, Mr. Abraham H. Feller, General Counsel of the United Nations, and Mr. John Maktos, Legal Adviser of the Department of State. The Irvine Lecturer, sponsored by Phi Delta Phi, was Honorable Wayne Morse who discussed the Taft-Hartley law before an audience that taxed the capacity of the Moot Court Room.

TUITION

At its May meeting, the Board of Trustees increased tuition from \$450 to \$600 a year. Subsequently, upon the recommendation of the Law faculty it created ten free tuition scholarships. In spite of the fact that so large a proportion of our student body are veterans receiving tuition and subsistence benefits from the federal government, the requests for financial assistance from the Law School have continued to be substantial in number and amount. It is almost certain that, as the government benefits expire, able and deserving students in larger numbers than heretofore will not find it practicable to meet the increased tuition charge on top of the expense of four years of undergraduate education. The cash scholarships presently available for law students will be wholly inadequate. Every increase in tuition must be accompanied by an increase in the means of subsidizing the cost of education for the financially handicapped. Otherwise the institution will put itself beyond the reach of many students of superior ability and will not meet the full measure of its obligation to the public.

ALUMNI

The Cornell Law Association, unable to meet during the war years, has again become an active organization, revised its charter and elected new officers. Alexander Pirnie, LL.B. '26, of Utica, was elected president by mail ballot and presided at the annual meeting held in Ithaca at the time of the general alumni reunions in June.

A large law alumni luncheon, held in New York City in connection with the State Bar Association meeting in January, was addressed by Honorable Myron C. Taylor.

The projected Edwin H. Woodruff Professorship of Law has received contributions of \$7,335 since the date of the last report, bringing the fund to \$32,000. It is hoped that this Professorship to honor Dean Woodruff will be in the minds of alumni of the Law School during the campaign just launched to raise money for The Greater Cornell.

The group of alumni, who for many years have been contributing a scholarship annually, have decided to establish an endowed scholarship in memory of the late Dean Charles K. Burdick. They have raised \$2,500 and they hope to increase this to \$10,000 during the coming year.

Another group of alumni have for the second year voluntarily pledged themselves to make monthly contributions to a fund to be used by the Law School in the discretion of the dean. The idea has attracted additional subscribers during the past year. It is noteworthy that many members of this group received their undergraduate education at other institutions and that their only association with Cornell was as students in the Law School.

ACTIVITIES OF THE FACULTY

The following summarizes some of the activities of the faculty during the past year:

Professor Thompson was on sabbatic leave during the second term and continued work on his Cases and Materials on the Law of Contract. He was elected to the Council of the American Association of University Professors for the term 1948-1950.

Professor Wilson, during his leave of absence in the second half of the academic year 1946-1947, gave lectures on American law and procedure at Witwatersrand

University in Johannesburg, and at Natal University College, in Pietermaritzburg, South Africa.

Professors MacDonald and Whiteside were visiting Professors of Law during the 1947 summer session of the Columbia Law School. Professor Keeffe was Visiting Professor in the summer session of the University of Southern California Law School.

Professor Willcox became a charter member of the Industrial Relations Research Association, a member of the editorial board of the *Industrial and Labor Relations Review*, a member of the Committee on Educational Program of the Washington School of Public Law, attended the American Law School Association's Conference on the Training of Law Students in Labor Relations at Ann Arbor in June, 1947, and acted in the spring of 1948 as arbitrator in a labor dispute in Rochester, under nomination by the Federal Mediation and Conciliation Service, and in another dispute in Waverly, N. Y., under nomination by the New York State Board of Mediation.

Professor Freeman attended the Carnegie Endowment National Conference on Professional Education.

Professor Farnham was elected for a five-year term to the University Faculty's Committee on University Policy.

Professor Laube served as Secretary of the University Faculty.

Professor MacDonald continued as Executive Secretary and Director of Research of the New York State Law Revision Commission. He responded to an invitation to address the Chicago Bar Association in connection with a proposal to establish a Law Revision Commission in Illinois, and will later testify before the Judiciary Committee of the Illinois legislature with regard to the same proposal. He became a director of the New York Legislative Service, Inc., a non-profit organization specializing in studies of the sources and progress of and the influences upon legislation. He was elected a member of the Catholic Commission on Intellectual and Cultural Affairs, Washington, D.C., which cooperates with similar groups in Europe and Latin America and with UNESCO.

Professor Whiteside was Research Consultant for the New York Law Revision Commission on the subject of the Measure of Damages, and the Distribution thereof, in an Action Brought for Wrongful Death.

Professor Sutherland also made several studies as Research Consultant for the Commission. His report on Relief from the Obligation to Pay Accumulated Alimony culminated in an act passed by the legislature in 1948. He made a study and a recommendation, approved by the Commission, for amending the present law concerning the sale or pledge of future earnings. He also prepared a report on the Privilege of a Newspaper Reporter to Withhold from Public Authorities the Sources of his News.

Professor Larson made a study for the Commission as a basis for an amendment of the statutory law relating to the appraisal of the value of the shares of a shareholder who has dissented from corporate action and demanded that he be bought out.

I have recently tendered to Governor Dewey my resignation as a New York Commissioner on Uniform State Laws, a position that I have held since 1926. The twenty-two years of service qualified me for election to life membership in the National Conference of Commissioners on Uniform State Laws. I was appointed to the Advisory Board of the *American Bar Association Journal*. It was my privilege to represent the University at a conference conducted by The Brookings Institution at Hanover on the preparation of materials for the study of international relations. In January, I received the President's Certificate of Merit for war-time service with the Lend Lease and Foreign Economic Administrations.

Two case books by members of the faculty were published during the year: Stevens and Larson, *Cases and Materials on the Law of Business Corporations*, and MacDonald, in collaboration with Professor Read of Minnesota, *Cases and Other Materials on Legislation*.

Professor Freeman's "Recent Constitutional Developments" was published in December.

Other works in preparation, besides Professor Thompson's case book on Contracts mentioned above, are:

Sutherland and Willcox, Materials for the course on Promises, Ownership and Security in Commercial Transactions.

Freeman, MacDonald, Sutherland and Stevens, materials for the first-year course on Introduction to the Study of Law.

Whiteside, chapters on the Statutory Rules Against Perpetuities and Suspension of the Power of Alienation, and in the Statutory Rules Limiting Accumulations, for inclusion in a comprehensive Treatise on the Law of Property being prepared by a group of experts in that field for publication in 1949.

Farnham, Cases and Materials on the Law of Real Property.

Robinson, a text book on Shipping and Marine Insurance.

Stevens, a revision of his 1936 text on the Law of Corporations.

Articles by members of the faculty appeared as follows:

Curtiss, "A State of Mind; Fact or Fancy", Cornell Law Quarterly.

Freeman, "International Administrative Law", Yale Law Journal, and "Rate of Return Via Enlightened Judgment", Harvard Law Review.

Keeffe, "Sick Sixty" (a discussion of the treatment of preferences under section 60 of the Bankruptcy Act) with Messrs. Kelly and Lewis; "Where There's a Will, There's a Way" (some reflections on nation-wide service of bankruptcy process) with Messrs. Horey, Jolly and Conable; "Lee Defeats Ben Hur" (a recommendation for the expansion of the use and effectiveness of class suits) with Messrs. Levy and Donovan, all published in the Cornell Law Quarterly; and "Washingtonians or Roumanians (diversity of citizenship for purpose of federal jurisdiction as applied to residents of the District of Columbia) with Mr. Rathvon, in the Nebraska Law Review.

Sutherland, "Reasons in Retrospect: Reflections on the Labor Laws of 1947, and on the Doctrine that Judges Should not Meddle with Social and Economic Arrangements Made by Legislatures", Cornell Law Quarterly; a translation of Professor Plaisant's, "The New French Law of Nationality", Cornell Law Quarterly.

MacDonald, Introduction to the Section on the Administration of Justice of the 1947 annual of the New York Legislative Service, Inc., a critique and forecast of the procedure developments in New York for the past several years and years ahead.

Books were reviewed by members of the faculty as follows:

Farnham: Real Covenants and Other Interests Which Run with Land, Clark, Cornell Law Quarterly.

Freeman: Agenda for Progressive Taxation, Vickrey, Cornell Law Quarterly; Joseph McKenna, Associate Justice of the United States, McDevitt, Brooklyn Law Review.

Laube: Criminal Justice and Social Reconstruction, Mannheim; Selected Writings of Benjamin Nathan Cardozo; Men of Law: from Hammurabi to Holmes, Seagle; Life of Roscoe Pound, Sayre, all in the Cornell Law Quarterly.

Sutherland: The Nine Young Men, McCune; Brandeis, A Free Man's Life, Mason; 1945 Annual Survey of American Law; Les Regles de Conflict de Lois dans les Traites, Plaisant; Singularium Observationum Iudicii Imperialis Camerae, Centuriae VI, Mynsinger, all in the Cornell Law Quarterly, and Labor Relations and Labor Law, a Symposium, various authors, in Industrial and Labor Relations Review.

Willcox: Management Functions under Collective Bargaining, Teller, Pennsylvania Law Review.

MacDonald: Prasker on New York Practice, Cornell Law Quarterly; Cases on Civil Procedure, Hays, Columbia Law Review.

ROBERT S. STEVENS,
Dean of the Law School.

APPENDIX X

REPORT OF THE DEAN OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor of presenting the following report of the medical College for the academic year ended June 30, 1948.

On September 23, 1947, the opening exercises were held for a student body of 84 first year, 79 second year, 73 third year and 78 fourth year students. Dean Hinsey gave the address of welcome and awarded scholarships to a number of the students.

On March 26, 1948, commencement was held for 78 fourth year students who were awarded the Doctor of Medicine degree. The Reverend Harry Emerson Fosdick delivered the commencement address.

From March 29 to June 17, 1948, there were three classes in attendance. Starting with the next academic year we will be back on what was our normal schedule with some modification of the length of the fourth year program.

CHANGES IN STAFF

Dr. N. Chandler Foot, Professor of Surgical Pathology since 1932, became Emeritus Professor of Surgical Pathology at the end of the present academic year.

Dr. James A. Harrar, Professor of Clinical Obstetrics and Gynecology, a member of our staff since 1932, became Emeritus Professor of Clinical Obstetrics and Gynecology on July 1, 1948.

It is with profound sorrow that I report the deaths of four of the members of our staff during this academic year:

On November 14, 1947, Clarence O. Cheney, Professor of Clinical Psychiatry, on our staff since 1930; on February 12, 1948, Alfred Franklin Hocker, Assistant Professor of Radiology, on our staff since 1937; on March 19, 1948, Edwin J. Doty, Associate Professor of Psychiatry, on our staff since 1937; on May 2, 1948 Henricus J. Stander, Professor of Obstetrics and Gynecology, on our staff since 1931. As head of the Department of Obstetrics and Gynecology, as Obstetrician and Gynecologist-in-Chief of the New York Hospital, and as President of the Medical Board of the New York Hospital, Henricus J. Stander made a profound and lasting contribution to our institution.

Dr. Horace T. Gardner, resigned as Instructor in Medicine and Instructor in Public Health and Preventive Medicine, as of September 15, 1947, to accept a position as Assistant Professor of Preventive Medicine at Yale University.

Dr. Thomas N. Graham, Instructor in Medicine, resigned as of August 1, 1947 because of impaired health.

Dr. Maynard B. Chenoweth, Assistant Professor of Pharmacology, resigned as of March 15, 1948, in order to accept an appointment as Associate Professor of Pharmacology in the Medical School of the University of Michigan.

Dr. Irving Rappaport, Instructor in Public Health and Preventive Medicine, resigned as of January 31, 1948, in order to accept an appointment at the Long Island College of Medicine.

Dr. Mary Ward, Assistant Professor of Clinical Surgery (Anesthesia) resigned as of June 1, 1948.

Dr. William T. Lhamon, Instructor in Psychiatry, resigned as of July 1, 1948, in order to accept an appointment at the Medical School of the University of Pennsylvania.

Dr. Edgar A. Lawrence, Instructor in Medicine, resigned as of July 1, 1948, to accept an appointment at New York University Medical College.

Dr. Curtis M. Flory, Assistant Professor of Pathology, resigned as of July 1, 1948, in order to accept the position of Pathologist at the Henry W. Putnam Memorial Hospital at Bennington, Vermont.

Dr. Joseph P. Chandler, Assistant Professor of Biochemistry, resigned as of August 1, 1948 to accept the position of Assistant Professor of Biochemistry at the University of Michigan and Director of Clinical Laboratories in the University Hospital.

Dr. Thomas P. Magill, Associate Professor of Bacteriology and Immunology, resigned as of July 1, 1948, in order to become Professor of Bacteriology and Immunology and Head of the Department at the Long Island College of Medicine.

On July 1, 1948, Dr. John M. Pearce was appointed Professor of Pathology and Professor of Pathology (in Surgery).

On July 1, 1948, Lt. Colonel Richard Fraser was made Professor of Military Medicine. On July 1, 1948, Dr. Rulon W. Rawson was made Associate Professor of Medicine. Dr. Rawson will head up the service in Medicine at the Memorial Hospital. On July 1, 1948, Dr. Thomas P. Almy was made the James Ewing Associate Professor of Neoplastic Diseases (Medicine).

Among the promotions in rank made to members of our staff mention should be made of: Dr. Harold G. Wolff who becomes Professor of Medicine (Neurology); Dr. Milton J. E. Senn, Professor of Pediatrics in Psychiatry; Dr. Arthur Palmer, Professor of Clinical Surgery (Otolaryngology); Dr. Bronson S. Ray, Professor of Clinical Surgery (Neuro-Surgery); and Dr. R. Gordon Douglas, Professor of Clinical Obstetrics and Gynecology. Dr. Douglas has been made acting head of the Department of Obstetrics and Gynecology to serve until the permanent head is appointed.

Dr. Dayton J. Edwards, who for many years has served as Assistant Dean, was made Associate Dean on July 1, 1948.

STUDENT BODY

In the report of the Admissions Committee for the previous academic year, mention was made of the large increase of students seeking places in the class for the fall of 1947 over that of any previous year. The present year (1947-48) has shown another sharp rise in the curve of applications submitted, with a total of 3,064 received up to March first, at which time the class was practically complete. The number reached over 3,200 before the year was over in spite of the fact that late comers were notified that no further applications would be processed.

Under the most favorable conditions, the evaluation of students' credentials is not easy, but when the number of applicants reaches into the thousands, the task becomes exceedingly complex. The primary requisite of acceptability to medicine is a college record of high scholarship, but indispensable to the development of physicians of the highest type, a good scholarship should be supplemented by evidence that the applicant for medicine shows professional promise, fine character in a broad sense, and a well adjusted personality. For information concerning these personal attributes, the Committee has to depend in a large measure on the comments and letters of recommendation of the teachers of students in College. Herein lies one of the present difficulties in the work of Admissions, for it requires a reading of only a few letters from faculty members who deal with a large group of students to convince one that with few exceptions these reports are perfunctory and carry little information concerning the personal attributes of the applicants. We are pleased to express appreciation for the excellent cooperation we have received from Professor LeRoy Barnes and the Committee of which he is chairman at Cornell University.

The work of Admissions during the war years was too disorganized to warrant an analysis of the scholastic grades of entering students. A study has been made, however, of the classes that entered in 1946 and 1947. For these two classes the grade point averages are 2.87 and 2.82 respectively. For the class selected to enter in September, the grade point average is 2.99 for the group. As a point for comparison, a survey was made for the class which entered in September, 1938, and the grade point average was found to be 2.76, a figure considerably lower than that of this coming year's entering class.

In 1946 and 1947, the Association of American Medical Colleges sponsored a Medical Aptitude Test which was administered by the Graduate Record Office. With the next academic year, this test will be given by the Educational Testing Service. This test was given in December, 1947, and reports were received that 810 applicants to Cornell took the test. The average figures for this group on two counts are as follows: General Ability-554; Pre-medical Science Achievement-543. These figures are based on a maximum score of 800. Fifty-three members of the next entering class who took the test show an average score as follows: General ability-

583; Premedical Science Achievement-589. These scores are of interest in indicating that the Committee on Admissions in selecting the candidates has chosen a group well above the general average of those applying to this Medical College.

Although the college degree requirement for admission which was given up in 1942 as a result of the Army-Navy training program has not been restored, it is of interest to note that over 80% of the students in the class to enter this coming fall will have a degree at the time of matriculation, and several more will be eligible for the bachelor's degree on successful completion of the first year of the medical course. This figure has added significance when comparison is made with the present third year class which shows less than 50% with degrees.

A total of forty-four different colleges and universities are represented in the class to enter this fall. Twenty-six members of the class prepared in the College of Arts and Sciences at Cornell and the next largest number from one college is four from Williams. The number of men in the class who saw service of one kind or another is less than that in the previous class. The number of students in the different groupings are as follows:

Veterans with active service.....	44
Veterans—educational program.....	9
Veterans—both.....	2
Non-veterans.....	26
Women.....	3
Total.....	84

Prior to the war, studies were made on several classes to determine the average student age at the time of matriculation. The results gave a figure indicating an average student age of approximately 22 years. The present first year class shows an average student age of 23.15, but the next entering class is again near the pre-war age with a figure of 22.25.

For several years the Committee on Admissions has made a practice of holding interviews for Cornell students at Ithaca. This year the representatives of the Committee interviewed 97 applicants at Willard Straight Hall. In addition to this group, the Committee has called for interview many students from other colleges, so that in all 244 applicants have been seen by one or more members of the Admissions Committee.

The practice followed in recent years of giving a student two weeks to decide whether he wishes to act favorably on a notice of acceptance from Cornell has been carried out as a routine procedure in enrolling students for the entering class. The student receiving an acceptance may do one of three things: (1) accept, accompanying it with a deposit, or (2) withdraw, with or without a statement of his plans, or (3) make no response whatsoever within the two weeks, and have his name cancelled from the list. Thirty-five students who were accepted for the class either withdrew or failed to respond. It should be emphasized that applicants apply to several or many schools and as yet the figures are not available from the Office of the Secretary of the Association of American Medical Colleges as to the exact number of applicants who have applied for the 6,564 places in the medical schools in this country.

After our class list had been formed a tabulation was made to show the origin by states of the students making up the group of over 3,000 applications. This list shows representatives from every state in the Union, as well as Alaska, Canada, and Puerto Rico. There are representatives also of a considerable number of foreign countries. Of the states contributing, the largest number of applicants, mention may be made of the following:

New York City.....	1,030	
New York State (exclusive of city).....	356	1,386
New Jersey.....		259
California.....		198
Massachusetts.....		172
Connecticut.....		131
Pennsylvania.....		119
Ohio.....		105

From the point of view of origin, New York shows by far the largest number of accepted applicants on our class roster with 52.3% of the next 1st year class claiming residence in this state. It is evident, therefore, that New York State places first in terms of the ratio of acceptance to applicants.

Last year the Committee was unable to fill all places in the third year class. This year the situation is reversed. Of the eleven students who made application for transfer only three could be accepted. It is significant of a trend that for the previous year there were 22 applications for admission to advanced standing into our third year.

At the opening of school last fall, 23 students were awarded scholarships which totalled \$8,570.

STUDENT HEALTH

During the past year, the work of the Medical Student Health Service has been done largely by Dr. George A. Wolf, Jr. Dr. Sterling Brinkley has also contributed a great deal of time to the Service, and he has been chiefly concerned with the continuing program for control of tuberculosis among the students. This Service is one branch of the Health Service for the entire institution which has been operated with Dr. Ralph Tompsett as Director. During the year, Dr. Tompsett resigned this responsibility in order to assume other duties in the Department of Medicine and he was succeeded by Dr. John McClement.

The statistical data for the year are as follows:—

Clinic visits	1,495
Routine Physical Examinations	163
Referrals to Out-Patient Clinics	120
Referrals to other consultants	68
Hospitalizations	26
Days of hospitalizations	153
Routine chest x-rays	579

These data show little change from those of the previous year. Days of hospitalization were fewer, and this is probably accounted for by the absence of any long periods of hospitalization by one or more students, as has sometimes been the case in previous years. The number of routine chest x-rays also showed a decrease and this occurred because at the beginning of this year the interval between these x-rays was changed from four months to six months.

This year, for the first time, B.C.G. vaccination was offered to those students who showed a negative tuberculin skin test. One hundred and thirty-one students were found to be tuberculin negative. Of these, 61 (47%) chose to be vaccinated with B.C.G. and of these 44 (72% of those vaccinated) had a change in their tuberculin test. No complications were noted in any of the vaccinated students. No case of tuberculosis in a student occurred during the year.

As in previous years, the routine physical examinations on the first and fourth year students were done with the help of members of the medical house staff. The dental clinic which was organized early in 1947 for students was discontinued because proper professional staff was not available. Reorganization of this clinic is being considered.

DEPARTMENT OF ANATOMY

This department has been fortunate again in having nine fellows who have participated in the teaching and research. There was considerable revision in the teaching of Histology and Embryology with greater emphasis upon the functional aspects. Working conditions in the dissecting room were improved greatly by the installation of fluorescent lighting over each dissecting table. Room A-108 was converted from a museum into a teaching laboratory for Dr. Papanicolaou's program in cytologic diagnosis. The cases were removed to the dissecting room and to the microscopic laboratory where they house the teaching models used in the work of the department. A new x-ray obtained from War Surplus Property and a new fluorscope were installed in the basement x-ray room.

We have continued to provide material for dissection for our third and fourth year students, and the members of our own house staff as well as those at the Memo-

rial Hospital. In addition to weekly sessions with our own house staff and the teaching of third year students, Dr. E. W. Lampe gave three postgraduate courses in Surgical Anatomy to surgeons preparing for their boards. Approximately, twenty-five surgeons took each of these courses. During this coming academic year, it is planned to give just one course of four weeks duration in June of 1949.

We regret to report the death of Jose F. Nonidez in September, 1947 shortly after he had arrived in Augusta, Georgia, to take over his new position as Professor of Microscopic Anatomy at the University of Georgia Medical School. Dr. John Norris was on leave most of the year because of illness and he will not be able to return during the coming academic year. Dr. Warren Eberhart has resigned to continue his surgical training at the Memorial Hospital. Mr. John Rivoli, Preparator in the department for the past ten years, has resigned and this work will be taken over by Mr. Henry Pinkham who has had a wide experience in this work.

In the neurological laboratory, Professors Berry, Hinsey and co-workers have completed the work in the central course of the ventro-spinothalamic tracts and the medical lemniscus through the brain stem and work is under way on a study of the central course of impulses started in the vestibular apparatus. Professor Geohagan has completed a simplified equipment for action-potential recording and a sudomotor. He has served as chairman of the Committee on electronic aids to medicine of the American Institute of Electrical Engineers and has planned a two-day conference to be held in New York this coming fall. He has also served on a Joint Engineering Council Committee on Cancer Research.

Professor Morrill has completed the fifth Section of his Regional Anatomy. Professor MacLeod has studied the 17-keto-steroids in impotence, gonadotrophin in relation to spermatogenesis, penicillin in relation to oxygen toxicity in human spermatozoa, and sulfhydryl groups in relation to the metabolism and motility of human spermatozoa. Professor Noback has observed morphological changes in fetus, infant and child and carried on studies in gerontology. The monograph on **THE EPITHELIA OF WOMAN'S REPRODUCTIVE ORGANS**, written by Professor Papanicolaou in cooperation with Drs. Traut and Marchetti, appeared in January, 1948. He is at work on the preparation of an atlas of colored drawings to illustrate the most significant types of exfoliated cells, both normal and malignant, used in cytologic diagnosis. The United States Public Health Service has provided funds for the establishment of a training center for Cytologic Diagnosis. This was started in September, 1947. Dr. John Seybolt has been at work with Dr. Papanicolaou since March, 1948 as has Dr. Terzano, and Dr. John T. Rogers and Dr. N. Chandler Foot will join the staff at the beginning of the next academic year. Due to the increasing demand for instruction, two formal courses of two weeks duration have been given. The first was from September 8 to 20, 1947, and the second from March 8 to 20, 1948. These courses were attended by approximately 130 doctors, the large majority of whom were pathologists. The courses gave instruction in the technic and training in the reading of the smears. In addition, the facilities of the laboratory have been extended to approximately 150 doctors and some technicians who have come to the laboratory between courses in order to study the material available.

The work of the department was supported by grants from the Commonwealth Fund, the Grayson Foundation and Mr. C. V. Whitney, and the United States Public Health Service. During the year, a substantial sum was received from the estate of the late Otto Sussman for support of research in the Department in the diagnosis of cancer.

BACTERIOLOGY AND IMMUNOLOGY

The teaching program of the department comprised the course given to the medical students in the third term of the First year and the first term of the Second year, and the course given to the student nurses. Drs. Robert Smith and John H. Laragh, who graduated from our Medical College this spring, assisted in the classroom laboratory teaching of the medical students, both of them helping during the fall term, and Dr. Smith again in the Spring term. Two graduate students, whose tuition is paid under the G. I. Bill, chose work in this department as their major subject.

The research activities of the department were in five general fields: (1) Influenza

and other viruses studied by Drs. Magill and Sugg and supported by a grant from the Office of the Surgeon General, War Department, and the Markle Foundation. Dr. Magill continued in charge of the Influenza Virus Strain Study Center which was brought to the general attention of scientific workers through the description of it published in *SCIENCE* and in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* late in 1947 and early in 1948. (2) Polysaccharide synthesis studied by Dr. Hehre, Mrs. Hamilton and Mr. Carlson and supported by a grant from the Sugar Research Foundation. (3) Fungi and their immunological properties, studied by Dr. Neill and Mr. Kapros and supported by a grant from the U. S. Public Health Service. (4) Dextrans and levans studied by Dr. Neill and Mr. Kapros and supported by a grant from the Sugar Research Foundation. (5) Differentiation of non-hemolytic streptococci studied by Dr. Hehre and Mrs. Hamilton.

The department and the school regrets the loss of Dr. Thomas Magill who is leaving this next year to head up the Department of Bacteriology at the Long Island College of Medicine.

BIOCHEMISTRY

The teaching program for undergraduate medical students has continued to develop along lines previously described. Three graduate students successfully completed their work toward the Ph.D. degree. Five men who have been doing post-doctorate training will move on to further training elsewhere or to permanent teaching positions. Four students will be working for advanced degrees at the beginning of the next academic year.

Dr. Fred H. Carpenter will work in the laboratory of Dr. Hugh Theorell in Stockholm on a Rockefeller Fund. Dr. William R. Carroll, who joined the staff in November of 1945 to carry on researches on tissue metabolism is leaving to accept an appointment at the National Institute of Health at Bethesda, Maryland. Dr. Arthur H. Livermore will depart this summer to become Assistant Professor of Biochemistry at Reed College in Portland, Oregon. Dr. George A. Maw who has been here since September, 1947, on a Commonwealth Fund Fellowship will sail for England in September to become Lecturer in Biochemistry, Department of Biochemistry, St. Thomas Hospital Medical School, Westminster, London. Dr. Lester J. Reed will leave for the University of Texas at Austin to become Assistant Professor of Biochemistry.

Work is still under way on synthetic penicillin with attention directed particularly on the mechanism of the synthesis discussed in last year's report.

More convincing evidence has been obtained that penicillinic acid is an intermediate in the formation of penicillin from the reaction of oxazolone and penicillamine hydrochloride. Synthetic penicillenic acid has been found to be identical with the product derived from the degradation of the penicillin. The synthesis of penicillin becomes then a question of the mechanism of the rearrangement of penicillinic acid to penicillin. A collaborative study with Dr. Craig of the Rockefeller Institute for Medical Research has been carried out on the purification and characterization of the various penicillins. Some progress has also been made on the synthesis of new penicillins that cannot be formed by the mold.

The synthesizing of methionine containing radiocarbon in the methyl group by Melville, Rachele and Keller has given a tool to demonstrate for the first time the oxidation of the labile methyl group fed in the form of this amino-acid. Now that the oxidation of the labile methyl group of methionine is established, the intermediary products in its conversion to carbon dioxide and the determination of their roles in metabolic processes become matters of considerable interest.

Earlier studies in this laboratory on the ability of various compounds to promote the growth of rats on methyl-free diets supplemented with homocystine established that a marked structural specificity was involved. During the course of testing other compounds structurally related to choline and betaine for growth promoting activity under these conditions, dimethylthetin, the sulphur analogue of betaine, was able to support growth about as well as choline itself. The naturally occurring homologue of dimethylthetin, dimethyl propiothetin, was also found to be an active methyl donor and it appears that these two substances may be present in animal tissues and may take part in the normal methylation processes.

The program of research on biotin has continued with emphasis placed on the biological role of this compound. Likewise, the researches on enzymatic systems in tumors under the grant of the Committee on Growth have been moving forward.

Professor du Vigneaud was awarded a gold medal and \$1,000 as the first Borden Award of the Association of American Medical Colleges at its annual dinner held at Sun Valley, Idaho, on October 27, 1947. This award was made for his contributions to the chemistry of insulin, sulfur containing amino acids, biotin, and penicillin and to the nutritional significance of amino acids containing sulfur. He gave three lectures at the International Congress of Chemistry held in London in July, 1947, nine lectures as Exchange Professor of the American Swiss Foundation and six others at different places in this country. Other members of the department contributed eight lectures and scientific papers at different meetings during the year. Fourteen papers appeared from this department during the year.

The work in this department has been supported by grants from the American Cyanamid Company and the American Cancer Society.

THE LIBRARY

The stacks were painted last summer and the draperies were replaced on the front windows. From time to time changes have been made in the hours of opening, varying from forty-four hours during the first part of the summer vacation to seventy-nine hours a week later. With a staff of two full-time attendants, one half-time, and a part-time student, this has placed a difficult load upon them. Many desirable services were omitted and only necessary routine was managed.

Instruction in the use of the library was given by the Librarian to the entering class. Previous years' instruction is showing results as upper classmen enter upon research for papers on special problems and graduates return to residencies or research. They have not forgotten the library and its use. Graduate students use the library a great deal.

The count of volumes is now 37,880, not including many volumes now in the lower stacks, many of which are duplicates. During the year, 611 volumes have been added. We are now receiving regularly over 600 periodicals, over half of which are paid subscriptions, others by gift or exchange. All valuable material is bound as soon as possible. Duplicate journals have been distributed to needy libraries as in the past.

The Librarian has attended meetings at the Academy of Medicine for consideration of problems of cooperation among local libraries and also the annual meeting of the Medical Library Associations in Philadelphia. The count of readers for the year, July 1, 1947 to June 30, 1948, gives the following figures: Total readers, 25,390; borrowers, 7,731; items borrowed, 10,235; inter-library loans, 120; borrowed from other libraries, 18.

MEDICINE

The provision of the New York Hospital of thirty-four members of the resident and intern staffs in this department has continued to make possible more adequate coverage of the Private Patient Pavilions, and the Out Patient Department, and to offer such needed opportunity for the training of able young physicians returning from the military services. The receipt of generous contributions from the Lester N. Hofheimer Foundation made possible the appointment of two fellows in psychosomatic medicine to supplement the work initiated under the grant from the Commonwealth Fund. Dr. Wilbert Sachs, a dermatologist expert in the pathology of the skin, was appointed as Assistant Professor of Clinical Medicine (Dermatology). Dr. Andrew J. Akelaitis was appointed Assistant Professor of Clinical Medicine (Neurology).

The work of the Medical Clinics has continued under the Direction of Dr. Connie M. Guion. During the first half of the year, she was assisted by Dr. William Grace and during the second half, by Dr. Eugene Horger, both of whom spent full time in the Out Patient Department.

In November, 1947, a coordinated program was developed with the Department of Surgery for a clinic for the care and study of vascular diseases under the direction of Dr. William Andrus of the Department of Surgery and Dr. Irving S. Wright

from the Department of Medicine. This is another step in cooperative effort between the two departments and is similar in intent to those already taken in the Neurology, Cardiac, and Pulmonary Clinics. The transfer of the activities of the Vascular Clinic to K-6 has opened the way for a much needed enlargement of the facilities for the operation of the general medical clinics.

The Psychosomatic Clinic, under the direction of Dr. Harold G. Wolff has continued to expand. The clinic meets five mornings and five afternoons each week and eighteen physicians have been engaged in the work. Approximately, twelve new patients are accepted each month for study and treatment and an average of twenty-three patients are interviewed each day. Total patient visits for eleven months in 1947 were 3,519. Conferences are held three times a week and are attended by thirty to forty physicians and students.

The Gastrointestinal Clinic under the direction of Dr. Thomas Almy has grown rapidly, and a night clinic has been inaugurated to extend the care of patients with psychosomatic disorders into the period of readjustment to full-time employment. The liver clinic, a part of the enterprise in gastroenterology has been considerably expanded under the direction of Dr. Daniel Labby and more recently by Dr. Mary Ann Payne.

There has been an encouraging increase in activity in the Dermatological Clinic during the past year. This has been possible chiefly through the expansion of a graduate training program which has brought five young physicians to the service of the institution.

Research in metabolism. During the year, Dr. Shorr and his associates have made significant progress in the study of hepatic and renal principles with opposite actions on the peripheral blood flow. They have been able to show that the play of these factors previously demonstrated as so important in reaction to shock are also involved in the syndrome of experimental renal hypertension, and in that of essential hypertension in man. Under both sets of circumstances large quantities both of renal vaso-exciter material and hepatic vasodepressor material can be demonstrated in the blood representing a homeostatic mechanism operative in the production of high blood pressure and opening the way to a large field of new research. They have also been able to establish for the first time a direct relationship between the adrenal cortex and a blood pressure regulating substance in the renal tubules. Following adrenalectomy, the kidney tubule rapidly loses its capacity to form vasoexciter material, a defect which cannot be corrected by salt substitution but can be removed by the use of desoxycorticosterone with the addition of salt. Of equal interest are the studies of nutritional cirrhosis of the liver where the blood is found to contain an amount of vaso-depressor material comparable in amount to that present in irreversible shock. Also of importance is the progress in purification of the hepatic vaso-depressor material. Preparations are now available in the laboratory in which 0.001 gamma of vaso-depressor material nitrogen induces profound vaso-depressor effects in experimental animals. Some idea of the chemical structure of this substance has been obtained.

Other projects under active investigation in the Metabolic Laboratories include: An investigation of the possible usefulness of strontium salts in osteoporosis, as well as continuation of the studies of the citric acid metabolism in its relation to urinary excretion and to calcification and decalcification, the prevention of renal stone formation by aluminum hydroxide gels, and the investigation of the usefulness of N-propylthiouracil in combination with iodine for the chronic management of Graves Disease.

Research in Infantile Paralysis. Under the direction of Drs. Deitrick, Shorr and Whedon, the possibility of benefit of an oscillating bed on the metabolic and physiologic derangements of immobilization on patients with poliomyelitis is being explored. Studies during the first part of the year were conducted on patients with severe and extensive paralysis about eighteen months after the infectious episode. It was found that at this advanced stage little or no metabolic benefit for the damaged muscle was provided by the oscillating bed. On the other hand, very significant improvements in cardiovascular function were achieved. It was also found that the adjuvant use of testosterone propionate was distinctly beneficial in improving the general metabolic status, particularly with regard to nitrogen metabolism and muscle mass. During the latter part of the year studies were ini-

tiated on patients with infantile paralysis about four to six weeks after their acute attack. These have not progressed enough to justify conclusions.

Research in Neurology and Psychosomatic Medicine: The study of certain phenomena associated with noxious stimulation of tissue has made it possible to approach the important topic of spread of excitation and facilitation within the nervous system. Experimental methods have been devised for the demonstration of alterations in function and structure as parts of the reaction of the organism to stress. Attempts have been made to formulate more constructive concepts concerning adaptive and protective reaction patterns of disease. Experimentation in medical teaching has included a consideration of emotional reactions and life situations. Interest has been focussed on the elaboration of methods of therapy for persons exhibiting reactions to life stress. Attempts have been made to formulate more constructive concepts concerning adaptive and protective reaction patterns of disease. Experimentation in medical teaching has included a consideration of emotional reactions and life situations. Interest has been focussed on the elaboration of methods of therapy for persons exhibiting reactions to life stress. Drs. Stewart Wolf, Herbert Ripley and H. G. Wolff are engaged in a five-year program of preparing a comprehensive monograph on human adaptive and protective reaction patterns in relation to disease. This is to be based upon an analysis of the clinical and experimental work of this department and should be an epitome of its psychobiological orientation. A survey of the experience of fifteen years of teaching Neurology in our institution has been published for the benefit of medical educators.

Research on Infectious Diseases and Chemotherapy. The principal investigations of penicillin conducted during the year have consisted of: continuation of the study of bacterial endocarditis; evaluation of various newly introduced methods of penicillin administration, and the study of the value of intermittent penicillin therapy. The clinical investigation of the toxicity of highly purified streptomycin has been continued with particular emphasis on the neurologic reactions, and it has been found that risk could be considerably reduced by diminishing the daily dose of the drug. Other studies of the action of streptomycin have included the investigation of the toxicity and absorption of dehydrostreptomycin; the effect of surface-acting agents on the potency of the drug against a variety of organisms *in vitro*; the effect of culture filtrates of the tubercle bacillus on the stability of the drug; the possibility that certain drug-resistant strains of tubercle bacilli actually require streptomycin for growth and the absorption and distribution of streptomycin using both a biological and a chemical method for assay.

Approximately 100 patients with tuberculosis have now been treated with streptomycin. It can be stated that streptomycin is a highly effective agent against tuberculosis infection, but that the period when the drug is of value is limited to several months because of the development of drug-resistant bacilli. Because of this complication the period of streptomycin therapy was shortened to forty-two days, the daily dose was reduced to one gram, and the entire daily dose was administered in a single intramuscular injection. On this shortened regimen the incidence of drug-resistant infections has been lowered considerably but, while it has been therapeutically satisfactory in many instances, it has failed in others because of its brevity.

Other studies of the sub-department of Infectious Diseases and Chemotherapy included *in vitro* and *in vivo* experiments of the action of subtilin and of para-amino salicylic acid; analysis of the effects of controlled variables on a standardized tuberculous infection in mice, and a joint investigation with Dr. John Kidd of the Department of Pathology on the anti-tumor and the anti-microbial activity of material from mold filtrates. The virus of poliomyelitis was isolated from the blood of an injected human by direct inoculation of laboratory mice.

Researches in Clinical Immunology. Dr. Mary Loveless has continued her investigations on a shorter method for the immunization of patients sensitive to ragweed pollen. During 1947, she has had under observation some thirty-five of her previously treated patients who received one or two injections of pollen emulsified in oil and lanolin. Immunologically and clinically, they responded as well as they had in other seasons with multiple injections of aqueous extract. She has also been engaged in a study of neutralization of antigen by reagin and of the immunology

of insulin allergy and insulin resistance. Clinically, she has investigated the effect of antihistamine drugs on a variety of allergic conditions.

Researches in Cardiology. Dr. Harold Stewart has conducted a large number of clinical investigations with members of the house staff and with fellows assigned to his sub-department. Investigations have included interpretation of the electrocardiogram in dextrocardia with situs inversus, experiences with the Shem regimen in the treatment of congestive heart failure, experience with the anoxemia test in patients with typical angina of effort, and atypical pain which may be due to coronary insufficiency, the amount of digitoxin required for adequate digitalization and the syndrome of the short P-R-long Q R S time.

Other studies of the department have included a group of studies by Dr. Bruce Webster and his staff on the prognosis of syphilitic heart disease, reinfection versus relapse in infectious syphilis, the use of penicillin in cardio-vascular syphilis, and in central nervous system syphilis, the use of penicillin-oil-beeswax and bismuth in early latent syphilis, and syphilis in pregnancy, and various drug combinations for the relief of pain in tabes dorsales. Extensive studies of muscular dystrophy, myotonia atropica and other diseases of muscle have been made by Dr. Ade T. Milhorat; alterations in colonic functions in man under stress have been observed by Drs. Thomas Almy and Maurice Tulin. Continued investigation of the diagnostic value of the secretin test have been conducted by Dr. Michael Lake; the secretion of gastric mucin following an alcoholic meal by Dr. Maurice Tulin; the action of antibiotics of fungi by Dr. George Lewis and Miss Mary Ellen Hopper; the effect of antifolic acid products in leukemia by Drs. Louis Meyer and Paul Reznikoff.

The Graduate Course in Internal Medicine directed by Dr. John E. Deitrick on our Bellevue Service has been filled to capacity since it began April 1, 1946. Eleven students who have received their medical education abroad have been admitted to the course and there is a considerable number of applications from foreign students on file.

Our medical wards at Bellevue have been repainted and our laboratories have been greatly improved. There has been some improvement in the record system and there is a possibility that the unit record system can be introduced before too long. The research being conducted under Dr. Deitrick includes the following: Clinical studies with folic acid; evaluation of dicumarol in the treatment of coronary occlusion; use of penicillin in the treatment of pneumonia; and studies on the effects of diet, diuretics and digitalis on acid base balance and mineral constituents of the blood in cases with cardiac failure. Dr. Lawrence W. Hanlon, a Fellow in Medicine, has played a major role in the studies of cardiac failure.

The following foundations, agencies and individuals have been made contributions to one project or more during the past year: Mr. Philip D. Armour, Mrs. McCoskrey Butt, Commonwealth Fund, Mr. John L. Given, Mr. Irving B. Hexter, the Barbara Henry Research Fund, Lester N. Hofheimer Foundation, Kellogg Foundation, Lederle Laboratories, Dr. George Lewis, Eli Lilly Company, Josiah Macy, Jr., Foundation, Milbank Memorial Fund, National Foundation for Infantile Paralysis, National Research Council, Charles Pfizer Company, Mr. Clarence S. Postley, Dr. Paul Reznikoff, Schering Corporation, Schieffelin and Company, Sharp and Dohme, G. D. Searle and Company, Strategic Services, Sterling Foundation, John Wyeth & Brothers, U. S. Public Health Service, Veterans' Administration, Helen Hay Whitney Foundation, Marie and John Zimmerman Foundation, and an anonymous donor.

MILITARY MEDICINE

Lieutenant Colonel Richard S. Fraser, MC, assumed the position of Professor of Military Science and Tactics, replacing Major Lawrence W. Hanlon, MC, who had been assigned as Professor of Military Science and Tactics for the school year 1946-47. This change was in compliance with the plans of the Surgeon General of the Army to assign regular Army officers to these duties in the various medical schools maintaining Medical ROTC activities. This change was effective August 15, 1947.

During the period from August 26th to August 28th, 1947, an orientation Conference for all medical Professors of Military Science and Tactics was held in

Washington, D. C. under the direction of The Surgeon General, during which plans and programs for the succeeding school year were discussed.

Since the accelerated program was still in effect for the senior class at Cornell, ROTC instruction for this class began September 8, 1947. The instruction for the remaining classes began on September 28. Instruction for each class consisted of a scheduled one hour period each week for a total of thirty-two weeks.

The following is a tabulation of enrolled students at the beginning of the school year: First year basic course, 1; second year basic course, 5; first year advanced course, 13, and second year advanced course, 5. The five senior students who were in the second year advanced course were appointed First Lieutenants, Medical Corps Reserve, upon graduation. One of these students, Dr. Donald F. Farrell, accepted an Army internship commencing July 1, 1948 at Oliver General Hospital, Augusta, Georgia.

The six weeks' summer medical ROTC camp will be held at Brooke Army Medical Center, Fort Sam Houston, Texas, commencing July 12, 1948. Eleven junior students will attend this summer camp.

The course here is partially didactic, comprising lectures and written examinations; and partly practical with discussion groups, map exercises and solution of medico-military problem. Numerous training films with sound have been used and have proved very satisfactory. In the first and second year advanced courses numerous medical professional films were shown.

Several of the students now enrolled in the ROTC hold commissions in the Officers Reserve Corps and two of them are assigned to active duty during this summer vacation. There seems to be a greater interest shown by students this year and it is anticipated there will be a larger enrollment next year.

OBSTETRICS AND GYNECOLOGY

In 1947, this department rendered medical and nursing care to an even greater number of patients than in the preceding years, which brought the highest census since the opening of the Woman's Clinic of the New York Hospital. The total census of discharged patients in 1947 was 10,702 as compared with 9,795 in 1946. In the obstetrical division, 4,899 women and 4,048 babies were cared for while 1,755 women were treated in the gynecological section. The uncorrected maternal mortality for the year was 0.7 per 1000 pregnancies and an infant mortality of 1.9 per cent. The total number of gynecological operations performed was 1,591 with a post operative mortality of 0.2 per cent. Because of this greatly increased census, it has become necessary to curtail the period of hospitalization in all cases where this would not be detrimental to the patient's welfare. During the past year 6,654 women were cared for in 190 beds of which 128 were ward, 26 private and 36 semi-private beds.

The assistantships in Obstetrics and Gynecology, wholly supported by the Rockefeller Foundation and designed to give further training to returned veterans, have proven to be of particular value, not only to those appointed, but also to the Department. The first two appointees have completed their training and at present are members of our full-time teaching staff. Two other returning veterans have just been appointed to these J. Whitridge Williams Assistantships.

There is a great need for properly qualified teachers in the two negro medical schools, Meharry Medical College, Nashville, Tennessee, and Howard University in Washington, D. C. The Rockefeller Foundation has been sponsoring the training of promising young men in an attempt to supply this need. At the request of, and in cooperation with the Foundation, the Department of Obstetrics and Gynecology has recently afforded training to a graduate of Meharry Medical College and now has one from Howard University College of Medicine for completion of his hospital training.

The investigative program of this department has been expanded during the year, as more veterans rejoined the staff. The John and Mary R. Markle Foundation continued to support the chemical studies on several phases of the eclampsia problem. Among these are determination of kidney function in the toxemias of pregnancy with particular reference to glucose tubular reabsorption together with intravenous glucose tolerance tests during normal gestation for controls; liver function in normal pregnancy and that complicated by toxemia; adrenal cortical

activity in these conditions, as related to the balance of sodium and potassium; plasma amino-acid and amino-nitrogen concentration in these states, as well as amino-acid excretion.

During the year, a grant was received from the United States Public Health Service for a study of renal clearance and placental transmission of the pure penicillins in normal and complicated human pregnancy. A combined study by the Sub-department of Ophthalmology and the Department, of eye-ground changes in normal and toxemic patients is under way, supported by a generous grant from the James Foundation.

The prophylactic employment of penicillin and sulfadiazine in prolonged labor and other complications, the technic of caesarean section where these drugs have been used prophylactically, nutrition in relation to the complications of pregnancy, delivery subsequent to vaginal repair operations, technic for the treatment of retroversion of the uterus, the fourth stage of labor, pain in labor, uterine innervation, factors involved in infertility, as well as those accounting for the high fetal death rate in breech presentation, an analysis of Brenner tumors, cervical, fundal and ovarian carcinoma, and the blood circulation in the ovaries are being studied. A cooperative undertaking by the Sub-department of Urology (Cornell) and this Department has resulted in a new technic for the correction of urinary incontinence.

The Commonwealth Fund is continuing its generous support of the vaginal smear investigations, relating to the early diagnosis of cancer in the female generative tract, conducted by the Department of Anatomy and of Obstetrics and Gynecology. In the pathology laboratory a number of students from foreign countries have pursued postgraduate studies for varying lengths of time.

During the year, an instructive nutritional study of the ante-natal ward patients was conducted by the Department of Nutrition of the New York Hospital. A surprisingly great number (58%) were on an inadequate diet. Such investigations will be extended with a view of evaluating an inadequate diet with reference to many of the complications of gestation and the measures which may be taken to offset such deficiencies.

With the re-establishment of the pre-war five-year residency system and a return from military service of our senior staff members, this department has been enabled adequately to cover all phases of instruction to medical students and nurses. The medical students start their courses in Obstetrics and Gynecology during their second year; in the third year they receive instruction in manikin, palpation, bacteriology and pathology and a lecture course throughout the year; in the fourth year they live in the Woman's Clinic for a period of two months during which time they act as clinical assistants in the wards, delivery and operating rooms and outpatient department.

With the passing on May 2, 1948, of Henricus J. Stander, this department lost the leader who planned and worked to develop it over the period of sixteen years in which we have occupied our present plant. Typical of his punctuality, his report was transmitted over his signature on April 29, 1948. His devotion to his department was real and to the whole institution most generous. He has served as an inspiration to all of us. Dr. R. Gordon Douglas, who was associated with him from the start in 1932, is serving as Acting Head of the Department.

PATHOLOGY

The course in general and special pathology, given to the second-year students during the latter two trimesters, were expanded further during the current academic year. With the aim of having the students become acquainted first-hand with the fact that the pathologist does not have to rely upon nature to provide lesions for his scrutiny, but on the contrary, by resort to experimentation, can make and study his own diseases, a series of experiments was added to the course in general pathology. Small groups of students were advised in this undertaking by two or more staff members, but in each case the students themselves planned their experiment after reading carefully the papers of original investigators who had previously worked in the field; next, the students performed the experiments under the supervision of their advisers and were thus obliged to master certain of the techniques of experimental pathology; finally in a conference conducted by one of the senior staff members, the students in groups reported their experimental findings before

the entire class, the latter having opportunity for questioning and discussion. The undertaking, unusual if not unique at the present time in the pedagogy of pathology, proved salutary and valuable to both students and staff. Augmenting as they did, however, the courses in general and special pathology that were already filled with systematic lectures, seminars, histological laboratory periods, and demonstrations in gross morbid anatomy, with additional extramural activities such as assisting with post-mortem examinations and the writing of essays in pathology, the experiments taxed certain of the students, and consideration will need to be given next year to ways whereby the total amount of the required work can be diminished.

During the current year the syllabus was expanded by the detailed formulation of the course in neuro-pathology. This proved all the more valuable to the students because of the lack of adequate text books in the field.

The staff, augmented last year by the addition of several assistants and instructors, found it possible to continue to provide a great deal of individual instruction in the laboratories, and in the scheduled demonstrations of pathological anatomy. The added strength likewise made itself felt in the character of the Clinical Pathological Conferences, where more detailed demonstrations of pathological anatomy, aided by kodachrome photographs, were given each week on cases carefully selected for their teaching and clinical interest.

The integration of the work of the Department of Pathology with that of other departments of the Medical School and Hospital proceeded in a number of directions. The arrangement was continued whereby assistants from the Department of Obstetrics and Gynecology and from the Department of Radiology are attached at all times to the Department of Pathology. In addition, Dr. Samuel Dooley, a senior member of the Department of Pediatrics, continued to hold his appointment in the Department of Pathology as well and throughout the year he participated actively in the routine and teaching work of both departments, thus effecting a mutual advantageous liaison. Members of the staff of the Department of Pathology were attached at all times to the Central Laboratories and to the Laboratory of Surgical Pathology. During the year Dr. Aaron Kellner of this department was appointed to succeed Dr. Ralph Stillman as Director of the Central Laboratories on July 1, 1948. A further integrative action was the appointment of Dr. John M. Pearce as Professor of Pathology and Professor of Pathology in Surgery to succeed Dr. N. Chandler Foot as Director of the Laboratory of Surgical Pathology on July 1, 1948. It is anticipated that the established connections with the Central Laboratories and the Laboratory of Surgical Pathology will go far towards enhancing the value and attractiveness of our training program for young pathologists, and detailed plans have been formulated for exploiting these additional opportunities.

During the year there was a continued expansion of the research activities of the various members of the Department. In Professor Kidd's laboratory, serological studies of distinctive constituents of normal and neoplastic cells have been continued with generous support from the Jane Coffin Childs Memorial Fund for Medical Research and an extensive investigation on cytological and biological studies of the changes that occur when benign virus papillomas become malignant has been prosecuted under the provision of a substantial grant from the Committee on Growth of the National Research Council acting for the American Cancer Society. In addition, an experimental project involving studies on the mechanisms of resistance to transplanted cancer have been carried out in collaboration with Dr. Helene M. Toolan, support for this project having been made available by the National Advisory Cancer Council. Further work has been done on the effects on tumor cells and certain types of bacteria of an antibiotic first isolated several years ago from a mold procured from the air of the laboratory and later found to be closely related to gliotoxin or identical with it. We are indebted to Professor John R. Johnson of the Baker Laboratory of Chemistry at Ithaca for several generous gifts of purified gliotoxin for use in this work, and more particularly for the benefit of his counsel in a number of chemical matters. In collaboration with Dr. Walsh McDermott and Dr. Ralph Tompsett, a number of observations have been made on the anti-bacterial effects of gliotoxin, and a preliminary study has been completed of the fate of gliotoxin in several species of animals. In collaboration with Dr. Agnes Burt, a study has been initiated on the cytological effects of gliotoxin on

various types of tumor cells. Further studies are underway to learn whether the antibiotic is biologically active against various types of cells *in vivo*.

With aid provided by the United Hospital Fund, Dr. Flory has continued his studies on the blood vessels and parenchymal cells of the exteriorized pancreas in experimental animals. Dr. Olcott has continued his morphological studies of experimental argyrosis, and has largely completed a detailed inquiry into the immediate pathology of cancer as revealed by more than 1,100 necropsies performed in this department on patients with cancer. Dr. Aaron Kellner, Dr. James W. Correll, and Dr. Anthony T. Ladd have continued their investigations on experimental cardiovascular diseases, notably on cholesterol atherosclerosis and experimental vascular hypersensitivity, with support provided by the United States Public Health Service. By feeding a synthetic detergent of low toxicity (Tween 80) to rabbits that were also being fed cholesterol, these investigators have found that the detergent-fed animals developed a much higher level of blood cholesterol, and a significantly greater degree of atherosclerosis of the aorta than did the control animals, fed cholesterol alone. Further studies are being made to learn whether established experimental atherosclerosis can be lessened by the administration of detergents, and whether more can be learned about the fundamental alterations in lipid metabolism as related to arteriosclerosis. Dr. Stevenson and Dr. Alvord, in addition to making detailed studies on the microscopic lesions found in a number of rare diseases of the nervous system, have largely completed an analysis of encephalomyelitis produced experimentally in guinea pigs, again with support provided by the United States Public Health Service. In these investigations, Dr. Alvord has demonstrated that the "antigen" responsible for experimental encephalomyelitis in guinea pigs has the properties of a phosphatide, while he and Dr. Stevenson have defined the nature of the degenerative changes in neurones of the eighth cranial nerve nuclei that follow prolonged streptomycin therapy. Dr. Robert H. More has written up his detailed histological study of the benign virus papilloma of rabbits and the squamous cell carcinomas that originate in them, and Dr. Bernard Kalfayan is extending these studies. Ten publications appeared from the Department during the year.

Dr. Curtis M. Flory spent the first two months of the academic year studying in the Pathological Institute of the University of Zurich, Switzerland. With regret we have recently received his resignation to accept an appointment as Pathologist at the Henry Putnam Memorial Hospital, Bennington, Vermont. Dr. James W. Correll has been appointed to our staff to succeed Dr. Flory. On November 18, Professor Kidd gave an invited lecture at the Johns Hopkins Hospital; throughout the year he has served as Vice President of the American Society for Experimental Pathology, and on the Council of the Section on Microbiology of the New York Academy of Medicine.

PEDIATRICS

The curriculum for undergraduate students in the medical college has undergone little change during the current year. Lecture clinics beginning in the last term of the second year and continuing weekly throughout the third year have presented a systematic survey of growth and development, nutrition, and clinical problems of infancy and childhood. Third year students have received bedside and seminar instruction in physical diagnosis, prophylaxis, and common contagious diseases (the latter in part at Willard Parker and Knickerbocker Hospitals). The fourth year clinical clerkship has offered an opportunity for the student to learn methods of prevention, diagnosis, and treatment of pediatric disorders while assuming increasing responsibility in the outpatient department and on the pediatric wards. The outpatient department work has also given them experience in making contact with parents. A series of conferences with parents of diabetic children has been instituted as a part of the pediatric metabolism clinic.

A series of twenty lectures was given by pediatricians as part of the postgraduate medical course offered to veterans.

The house staff receives part of its training and instruction in the outpatient department and part on the pediatric wards and the newborn nurseries of the Woman's Clinic. In addition, assistant residents have spent periods of one to three months acting as house officers at Knickerbocker, Memorial, and Willard Parker

Hospitals. The experience obtained there in diagnosis and treatment of poliomyelitis, tumors in childhood, and contagious diseases has invariably proved a valuable adjunct to their training in the New York Hospital. It is planned to continue these affiliations for the coming year and, in addition, another with the Hospital for Special Surgery.

The continued collaboration with the Departments of Pathology, Radiology, Psychiatry, Obstetrics and Gynecology, and Pharmacology in undergraduate and graduate teaching has proved fruitful.

In all phases of instruction to medical students, nurses, house staff and veterans, there has been continuing emphasis on standards of normal physical and emotional growth and development.

An unusually large number of physicians—one hundred thirty-seven in all—visited the department either for short periods (one hundred five for a few hours to three days) or for a longer term of observation (thirty-two for one week to six months), the augmented number due in part to the general easing of international travel and particularly to the International Pediatric Congress which was held in New York City in July of 1947. Twenty-five of the visiting physicians were from ten Latin American countries, and ninety-eight were from twenty-one other foreign countries (Australia, Belgium, China, Czechoslovakia, Denmark, England, Finland, France, Greece, Holland, Hungary, India, Italy, Norway, Palestine, Philippines, Portugal, Russia, Spain, Sweden, Switzerland).

An outstanding event of the year was the opening of the Institute of Child Development on September 1, 1947, under the direction of Dr. Milton J. E. Senn, Associate Professor of Pediatrics in Psychiatry. This Institute gives supervised training in growth and development and child care, from the newborn period through adolescence, to graduate and undergraduate students of medicine and nursing in the fields of pediatrics, public health, and psychiatry. Emphasis is placed on the so-called normal individual, particularly in his relationships to other people; the emotional concomitants of illness have been studied as well. Graduates in medicine receiving full time training consist of three Fellows in pediatric psychiatry for two-year periods, and three Fellows in pediatrics for a one-year period. Support for these Fellows has come from The Commonwealth Fund and from the United States Public Health Service. Most of these physicians, on completion of their training in the Institute of Child Development, will accept positions in teaching institutions or in the United States Public Health Service. These Fellows have received full-time instruction by means of supervised clinic work, lectures, case conferences, group discussions, and seminars at the New York Hospital-Cornell Medical Center, and by utilization of community resources such as the New York City Department of Health well-child conferences, and public schools. Other physicians, including many visitors as well as members of the New York Hospital staff, have attended some of these meetings and have had many individual conferences. In contrast with the large number of changes reported last year in the personnel of the full time medical teaching staff, there have been no changes in 1947-48 except for the return in January, 1948 of Dr. Margaret Dann after a leave of absence.

The resignation of Miss Norma Alessandrini, who served as Director of the Division of Occupational Therapy since June, 1946, was regretfully accepted as of March 31, 1948. We are fortunate to have Miss Evelyn Wolff as her successor. The occupational therapy service now offers its facilities for twelve hours a day. This year a total of 323 children—bed, wheelchair or ambulant patients—took part in play and craft projects. Affiliating occupational therapy students from Columbia University, New York University, and New Hampshire, as well as New York Hospital student nurses, have received part of their training in this division.

Research activities of the department have covered a wide range. Studies in rheumatic fever include immunological and biochemical investigations aimed at finding the hereditary factors which may be responsible for susceptibility, as well as clinical follow-up of several hundred adult patients and their families. The outpatient transfusion clinic organized in 1944 has proved its worth not only to patients suffering from Mediterranean and sickle-cell anemias, hemophilia and other conditions requiring frequent transfusion, but also in investigation of a variety of hematological problems.

Renal mechanisms in premature and full term infants have been studied as part of a general study of physiological changes in growth. This study includes the effect of water deprivation on urea and insulin clearances, the effect of pituitrin during diuresis, and the effect of changes in protein intake. Determinations of penicillin clearances are being made. A technique has been devised for determination of endogenous creatinine clearances as a measure of glomerular filtration.

Investigations have been completed or are in progress on experimental transmission of toxoplasmosis by milk during lactation in rats; assay of antidiuretic substance in the urine of nephrotic patients, use of newer therapeutic agents such as procaine penicillin, aerosol penicillin, antihistaminic substances, and aminopterin; and a follow-up of patients who were vaccinated with BCG in 1926-1938. Studies in the incidence of retrolental fibroplasia in children who were prematurely born, and studies in the efficacy of multiple immunizations against the common contagious diseases of childhood have continued.

Many of these studies are being carried out in cooperation with other departments of Cornell University including the Department of Physics at Ithaca, and the Departments of Biochemistry, Anatomy, Physiology, Medicine and Ophthalmology in the Medical College. In others there has been cooperation from the New York City Department of Health and Bureau of Vital Statistics, Columbia University, and Memorial Hospital.

Financial support for research and teaching activities has come from a number of outside sources: Pediatric BCG Fund (Mead Johnson and Company), Marion R. Ascoli Fund, Pediatric Kellogg Fund, Rockefeller Foundation Fellowship Fund, The Commonwealth Fund, Helen Hay Whitney Foundation, Pediatric Vision Fund (Massachusetts Eye and Ear Infirmary), Field Foundation Fund, McHarg Fund, Rheumatic Fever Research Grant, and the United States Public Health Service.

Twenty-three papers were published from the department during the year and 15 papers are in press. One hundred and five addresses have been delivered by staff members to medical and lay groups during the year.

PHARMACOLOGY

The work in the Department of Pharmacology during the academic year 1947-48 has developed satisfactorily along the same general plans of the preceding year. While there have been a few losses from the staff, these have been largely compensated for and the prospects are that the department will be further strengthened in the near future.

In March, Dr. Maynard B. Chenoweth, who was associated with the department for nearly eight years, resigned to accept an associate professorship at the University of Michigan. At about the same time, Dr. Oscar Bodansky transferred his main allegiance to the Sloan-Kettering Institute where he holds the appointment of Associate Member in Biochemistry. However, he will continue his association with the department where his duties will include lectures to the medical students and direction of the project on the mechanism of action of the digitalis glycosides, supported by a grant from the U. S. Public Health Service. With the completion of the buildings of the Sloan-Kettering Institute, Dr. Frederick S. Phillips has transferred his experimental work from our department, but he will continue to hold an appointment and will direct work under a new grant from the American Cancer Society for the study of the pharmacology of chemotherapeutic agents of possible value in the treatment of cancer. He will also participate in the teaching program.

Dr. Carleton C. Hunt is also participating in work at the Sloan-Kettering Institute in addition to his work here supported by the Chemical Corps of the U. S. Army. Dr. Hunt has been awarded a fellowship in Neurology from the National Research Council which he will utilize for further training in various institutions during the next three years.

Dr. W. Clarke Wescoe rejoined the department in April, following his discharge from military service. A new addition to the department is Dr. Frank C. Ferguson, one of our former graduates, also just returned from military service, who will work on one of the projects supported by the American Cancer Society.

The research program of the department has been stimulated by the presence

of a number of students working under various fellowships. These include: Dr. Piotr Kubikowski, Professor of Pharmacology at Warsaw, who was here on a fellowship from the World Health Organization of the United Nations; Dr. Conrado Dayrit from the Department of Pharmacology at Manila, supported by a Kellogg Foundation fellowship; Dr. Samuel J. Shane, supported by the Department of Veterans Affairs of Canada; Dr. Eduardo Faraco, on leave from the staff of the Medical School of Brazil; and Dr. Romulo Guevara, Associate Professor of Pharmacology at Manila.

During the year, Dr. Charles J. Kensler, who held a U. S. Public Health Service Fellowship, completed the requirements for the Ph.D. degree. He will continue to work in this department under a fellowship supported by the American Cancer Society.

As in the past, a considerable portion of our research program has been supported by research grants from various industrial sources. These funds are accepted with no restriction on their use other than assignment to some research project being conducted in the department. It is significant that several firms have continued their contributions over a period of more than ten years. The total amount received during the year was \$30,500 and arrangements have been completed with other firms for contributions amounting to about \$10,000. Among the firms which provide this support are: The Campbell Products Company, Cinchona Products Company, Eli Lilly Company, Lakeside Laboratories, Van Dyke Company, Winthrop Stearns, Inc. and Wyeth Company.

Another important source of funds continues to be government agencies and other foundations. Most of the grants under which we have worked in the past, have been renewed for next year. The grant from the U. S. Public Health Service for the study of the mechanism of action of the digitalis glycosides has been renewed for \$15,714.00; the grant from the American Cancer Society for a study of the mode of action of Azo dyes in the production of liver tumors, has been renewed for \$10,500, and they have awarded an additional grant for the study of the pharmacology of compounds influencing mitosis and growth amounting to \$9,135. Support has been received from the Chemical Corps of the Army for a number of years, amounting to \$1,000 a month, and this will presumably continue beyond the present expiration date in October. A further contribution of \$1,000 has been received from the Baird Foundation. The total sum expected from these sources for use during the coming year amounts to \$48,349, which is a considerable increase over last year.

With a few minor modifications, the general plan of our teaching program has been continued as in the past. This includes the introductory course given to the students at the beginning of their second year, the lectures in applied pharmacology given throughout the third year, the conference on therapy for the third and fourth year students, and the informal sessions for reviewing preparations of drugs and their clinical application to sections of the fourth year class in Medicine.

The continued success of the Therapy Conferences deserves special mention. These have been held weekly throughout the year and appear to be serving a useful function in the teaching program. Selected conferences have been published regularly in the New York State Journal of Medicine and in the American Journal of Medicine. During the year, the second annual volume of these conferences was published by the Macmillan Company, and the third volume is now in press. These volumes are having a large sale, and it appears that in the future, the royalties received will cover the cost of recording the conferences.

The major portion of all research carried on in this department is now supported by outside funds, and excellent progress has been made in several lines of work. Among the studies which Dr. Gold and his group have been pursuing in the field of clinical pharmacology during the past year, three deserve special mention, namely, the screening of digitalis glycosides and partially synthesized materials in patients with auricular fibrillation, comparison of all the cinchona alkaloids for their action on the circus movement of the human fibrillating auricles, and the development of a technic for the management of congestive failure.

Among those who have participated in these studies are Drs. Walter Modell, Nathaniel Kwit, Samuel Shane, Conrado Dayrit, Milton Kramer, William Zahm, and Harold Otto.

The widespread interest in these studies is reflected in numerous invitations for the presentation of this material by Dr. Gold. In the period between May 1, 1947 and May 1, 1948, he delivered twenty-eight lectures in various parts of the country. Dr. Gold served as Consultant to the Surgeon General of the Army and delivered several lectures on "Cardiovascular Agents" during a period of two days at the Army Medical Center in Washington. As Managing Editor of the Cornell Conferences on Therapy, he has prepared Volume III for publication. He has been active on the Revision Committee of the U. S. Pharmacopoeia.

During the past year, Dr. Bodansky, with the assistance of Mr. Finkelstein, has studied the effect of cardiac glycosides on some of the exzymic activities of cardiac muscle.

Drs. Riker, Wescoe and Hunt have devoted most of their time to studies on the pharmacological effects of compounds which are specific and irreversible inhibitors of cholinesterase. Dr. Hunt has been concerned also with studies on the pharmacology of certain of the nitrogen mustard compounds.

Dr. Chenoweth's work has concerned various aspects of cardiovascular pharmacology. With Dr. Solomon Garb, he has made a study of the electromyogram from the contracting isolated papillary muscle from the cat heart and has been able to show that this tissue exhibits electric changes similar to those of the human electrocardiogram and that they are affected in a similar manner by drugs. This evidence will necessitate a re-interpretation of the significance of the human electrocardiogram. They have also studied the conditions favoring ventricular fibrillation, with special reference to the role of epinephrine, produced by various chlorinated hydrocarbons such as chloroform.

During the past year Dr. Kensler has continued his work on the mode of action of azo compounds which produce liver cancer in the rat.

Dr. Travell has pursued her interest in the mechanisms and treatment of skeletal muscle pain. Data collected during several years was assembled, and in collaboration with Drs. Rinzler, Bobb and Hanlon was presented in chart form. These charts formed the basis of a scientific exhibit entitled, "Somatic Pain Syndromes" at the meetings of the American Medical Association in Atlantic City, June, 1947, and of another scientific exhibit entitled, "Chest and Shoulder Pain: Treatment by Block of Somatic Trigger Areas" at the meetings of the New York State Medical Association in New York, May, 1948.

In extension of this aspect of the work, a controlled study is now in progress on the effects of synthetic alpha-tocopherol in cardiac and somatic varieties of chest pain. In collaboration with the Department of Biochemistry, investigation of creatine metabolism in patients with chronic muscular pain has been continued.

During the year, publications of the department include fourteen papers, eleven abstracts published in the Proceedings of the Federation of American Societies for Experimental Biology, and ten Conferences on Therapy.

PHYSIOLOGY AND BIOPHYSICS

There have been relatively few changes in the organization of the Department this year. The teaching staff would be small if it were not for the research projects supported by outside organizations. All the research workers have been anxious to take part in the teaching because they have realized that it is an important part of their training. Dr. Ben B. Johnson who was working on the calorimeter as part of the Navy project has left for a residency at Bellevue Hospital. His place was taken for this year by Dr. Frank Ebaugh.

Four distinguished physiologists have been guests of the department during the past year and have given assistance. Dr. Cecil K. Drinker, formerly of Harvard Medical College, has given lectures and demonstrations on lymph flow and has taught the staff considerable operative technique. Dr. F. Gudernatsch after retirement from his professorship at New York University has assisted in bibliographic search on the subject of fever and has given demonstrations of his classical experiments in endocrinology. Professor Yrjö Reenpää, Professor of Physiology at Helsinki was here for two weeks and gave one lecture. Professor Rudolph Thauer made a short visit and conducted seminars on temperature regulation. He established himself as an authority in this field in Germany before the war. At present he is working for the United States Navy.

The teaching schedule changed little since last year. The department is fortunate in having such equipment that it can train the students in difficult methods. The student apparatus is in first class condition.

The research supported by the Russell Sage Institute of Pathology has been carried out with the calorimeter and has dealt chiefly with the effects of varying temperature on the metabolism of women. On the Navy project, an apparatus has been developed by Drs. Hardy and Richards to study the total heat load of the environment. Miss Stoll has made a study of surface thermometers. Drs. Hardy and Prouty and Miss Barrett have perfected a new and relatively inexpensive calorimeter for small animals. Work on the Kold Hold Chamber has been held up by the delay in preparing the room to house the apparatus.

On the American Cancer Society Project, Drs. Bird, Evans, Clements, George Kauer and McCormack have made good progress in their study of the metabolism of bone marrow and leukemia cells.

Papers have been presented at meetings by Miss Stoll, Drs. Hardy, Richards, Prouty, Bird and Ebaugh. Dr. Du Bois has prepared a small monograph on Fever and the Regulation of Body Temperature, and gave the Mellon Lecture on high temperatures at Pittsburgh on May 27, 1948.

The Department has been fortunate in having several members of other departments to help in the teaching. Dr. John MacLeod of the Department of Anatomy gave the lectures on endocrines. Dr. William Geohegan of the Department of Anatomy has acted as a consultant in the construction of apparatus. Dr. Robert Furchgott of the Department of Medicine helped in the student laboratory. Joint research was carried on with Dr. Shorr and his group in the Department of Medicine and with Dr. Carl Javert in Obstetrics and Gynecology. Dr. Hardy is serving as a consultant to the Memorial Hospital in the field of infra-red spectroscopy. The most important means for keeping in touch with members of other departments was the informal luncheon held four times a week in the Department of Physiology.

Drs. Hardy, Richards, Prouty and Du Bois and Mr. de Haven are consulted frequently by scientific workers in the Navy. Dr. Du Bois is serving on three government committees, the National Research Council Committees in Aviation Medicine and on Undersea Warfare, and the U. S. Public Health Service Physiology Study Section. He is also a member of the Physiology Section of the American Heating and Ventilating Engineers. Dr. Hardy is preparing a chapter on human factors in submarines for a handbook to be published by the Navy. He has just finished a chapter on the physics of heat loss for a handbook on clothing and environment.

The Department of Physiology has come into close touch with the Cornell Aeronautical Laboratory in Buffalo, the University at Ithaca, and our Department of Public Health and Preventive Medicine through the newly formed Cornell Committee on Air Safety Research. This committee has taken charge of Crash Injury Research under Mr. Hugh de Haven who works in the D building. This project has attracted a great deal of attention and has stimulated improvements in aircraft design which have saved many lives.

The increasing amount of work imposed upon members of this department by the armed services and engineers is a burden but well worth the effort. World War II demonstrated that the physiological limitations of man had become the engineering limitations of airplanes and submarines.

In presenting Dr. Du Bois to President Alan Valentine for an honorary degree at the University of Rochester on June 21, 1948, Professor William S. McCann concluded by stating, "I present to you Eugene Floyd Du Bois as a true Scientist, an intrepid Naval Officer, a skilled Physician, an able Teacher, and a great Human Being."

PSYCHIATRY

The undergraduate teaching has been reorganized along several lines. In the first year the development and growth of personality from infancy to old age are presented in a series of lectures. Seminars are utilized to review the material discussed, which includes physiological, psychological, and sociological aspects. This course offers an opportunity to explain interpersonal relationships which form the basis for patient-physician relationship. The second year course is given largely in the out-patient department of the Payne Whitney Clinic. The student learns the taking of a psychiatry history and psychiatric examination. The ambulatory

patients present the type of psychopathology which every physician meets in his practice. Four afternoons of this course are spent on the study of advanced and deteriorated psychiatric patients at the Manhattan State Hospital. In the third year the students become acquainted with all types of psychiatric disorders in the Payne Whitney Clinic and on the wards of the medical and surgical departments. Increasing emphasis has been put on teaching psychiatric treatment which the students have an opportunity to practice on selected patients during their fourth year. A review of the therapeutic results obtained by students during the last few years has been most encouraging.

The resident training program and the postgraduate teaching of pediatric fellows have been continued. The postgraduate training with the psychological and psychiatric aspects in internal medicine, carried out jointly by the Departments of Medicine and Psychiatry, has again been supported by the Commonwealth Fund. The postgraduate training in psychotherapy has been utilized by several psychiatrists who received a one year fellowship from the U. S. Veterans Administration.

Research work in psychopathology and clinical psychiatry (Dr. Diethelm and co-workers) dealt primarily with investigations of the influence of emotions on personality functions. It became possible to demonstrate the far-reaching extent to which anxiety may affect reasoning in predisposed individuals. These findings raise considerable doubt of the validity of the current concept of schizophrenic thinking disorders. Experiments are therefore being developed by the psychological groups to clarify the nature of various types of deterioration. Investigation of the influence of emotions of various types on attention and concentration have been continued. Experimental investigations of the so-called color shock reaction with the Rorschach experiment have been completed. Psychological research was continued, together with the Institute for Research in Clinical and Child Psychology at Hunter College, through experiments in concentration and motivation, in failure reaction and in conditioning.

Psychopathologic and neurophysiologic, including electroencephalographic, studies of epileptic and epileptoid reactions were continued. Clinical investigations included the use of various drugs to alleviate anxiety. Studies in child schizophrenia and related psychopathological studies progressed well. In conjunction with the Department of Medicine and Surgery specially planned psychological tests are applied in the study of the results of lobotomy operations on patients suffering from chronic psychiatric disorders or from persistent, extreme pain.

The Payne Whitney Nursery School was closed June 1, 1947, the research program which was started 10 years ago having been completed. Much experimental material has been accumulated and Dr. J. Louise Despert, who was in charge of the project, is continuing to work on these records. In the fall of that year a new school was opened as The New York Hospital Nursery School, directed jointly by the Departments of Pediatrics and Psychiatry, under the leadership of Dr. Milton J. E. Senn. The school will offer an opportunity to observe and treat children of two to five years who suffer from minor emotional difficulties and behavior disorders. These children are selected from the pediatric department. This new type of nursery school will serve for the study of therapeutic methods and be of great value in the training of child psychiatrists and pediatricians.

Dr. Ade T. Milhorat and his co-workers continued their studies on disease of muscle, investigating further utilization of Vitamin E in progressive muscular dystrophy and the role of mucin. Vitamin absorption studies are also extended to old age. The effect of blood from patients during certain emotional states on the activity of the isolated intestine of the rabbit is under further investigation. Efforts are being made to determine the nature of the factors and their distribution in the various fractions of the blood.

Under the direction of Dr. Harold G. Wolff, broad clinical and experimental studies in the fields of neurology and psychobiology were continued. Studies on pain included investigations into the nature of pain, headache and migraine. Other investigations were directed at the emotional influence on glaucoma, on cardiovascular functions and disorders, on gastro-intestinal functions and disorders, and on menstrual and external genital functions. Chemical investigations on myasthenia gravis were continued.

The research program dealing with the study of the etiological factors in chronic alcoholism is progressing satisfactorily. Many of the previously mentioned investigations are related to this broad project which includes psychological, psychopathological, physiological, pharmacological and sociological-anthropological aspects. Significant leads appeared in a psychopathological analysis of all alcoholic patients who have been treated in the Payne Whitney Clinic during the last fifteen years. The studies of emotional reactions and the relationship to alcohol consumption was undertaken by biochemical and physiological experiments, and by psychological and psychopathological investigations. Sociological investigation was started in a selected group of the population.

Addresses have been presented by Drs. Carl Binger, J. Louise Despert, Oskar Diethelm, William T. Dixon, Phyllis Greenacre, Ade T. Milhorat, Thomas A. C. Rennie, Herbert S. Ripley, Howard C. Robbins, Fred V. Rockwell, Mary Jane Sherfey, Livingston Welch, and Harold G. Wolff before various medical meetings and societies. Thirty-five papers from this department have been published during the year.

PUBLIC HEALTH AND PREVENTIVE MEDICINE

The teaching has been improved by the addition of a group of young enthusiastic staff members including Drs. Day, Emmett, Rappaport, Yankauer, and Brinkley. Some of the war experience gained by these men has been of real value both in teaching and in research. Dr. Emmett was in charge of the course in Parasitology and he was assisted by Dr. Rappaport. Dr. Franklin Foote who was instructor in Public Health at the Carlyle Army Training Camp throughout the war returned to help in the teaching in Public Health. More visual aids have been used in teaching environmental sanitation and industrial hygiene and fewer formal lectures have been given. Four afternoons were devoted to laboratory work in vital statistics. Industrial health problems have received more emphasis than in the past.

In the third year Preventive Medicine, the section work was greatly improved. The work at the Strang Clinic in the Memorial Hospital under Dr. L'Esperance was particularly popular with the students. Outstanding was the work of Dr. Ollstein in School Health teaching, of Dr. Chaves in the Pulmonary Clinic, of Dr. Berenberg in Child Health, and of Dr. McClement in the Health Service of the Center. The work in the homes of the people with the Public Health nurses was an interesting exercise. The community reports that have been prepared by the students are an important part of the course. Some of them show a real insight in the community problem of provision for adequate medical care. The department offered a prize of \$100 for the best report and this was awarded to Mr. Daniel L. Crandell for his study of "Plantation Health in Hawaii".

The clinics in Preventive Medicine which are organized by this department and conducted by various members of the clinical staff of our institution have improved each year. These valuable teaching exercises have been aided by more than twenty members of our own staff, together with the assistance from clinicians from other institutions such as Bellevue Hospital and Montefiore Hospital.

Under the direction of Dr. Emerson Day and with the assistance of Dr. Sterling Brinkley, the Kips Bay-Yorkville Cancer Prevention-Detection Center was opened in September, 1947. This clinic is a cooperative experimental project of this department and the New York City Department of Health, with the objective of determining the feasibility and the best methodology of a cancer detection and well-adult clinic. In its first eight months of operation seven hundred patients have been examined with the detection of six early cancers and the diagnosis of significant non-malignant conditions in approximately 20 per cent of the examinees. Dr. Day has an appointment at Memorial Hospital and membership in the Professional Executive Committee of the New York City Cancer Committee. In addition he has devoted considerable time to educational talks on the radio and television programs in connection with the expansion of the Department of Health's cancer control program. He has been the consultant of the Cooper Union in regard to its student health program, the development of a new health office, and an extended program of student health examinations and consultations. With the assistance of Dr. Brinkley, a chest x-ray survey of 1,600 students and faculty members was completed in April. Dr. Day is a member of the Cornell University Committee for Air

Safety Research and is also a consultant to the Cornell Aeronautical Laboratory in the physiological and public health aspects of a recently initiated long-term project for the development of supersonic flight.

Dr. Arnold W. Pratt, with Mrs. Dorothy Duerschner, carried out an intensive program on electro-chemical studies of the penicillin-albumin complex. This was supported by a grant from the Seaman Fund of the New York Academy of Medicine. Dr. Nine Choucroun, working under a special grant from the Josiah Macy Foundation, continued her studies upon the components of the tubercle bacillus. Dr. Bernard Davis, a Research Associate and a member of the staff of the United States Public Health Service has been given space in this department and plans to carry out a five-year study of the biology of the tubercle bacillus. Dr. Eleanor Jackson, working under a grant from the Rosenwald Fund, has continued her studies on the etiology of Scleroderma and in related fields. Dr. Yankauer, in addition to his work as the director of the Kips Bay-Yorkville Health Center, carried out an epidemiological study on infant immunity to poliomyelitis.

Dr. Morton C. Kahn was invited by Dr. John C. Burgher, Director of the Yellow Fever Research Laboratories at Yaba, Nigeria, West Africa, to devise experiments to determine whether it would be feasible to classify certain yellow fever and malaria carrying mosquitoes by the sound method devised by Dr. Kahn and Mr. William Offenhauser a few years ago. This project was financed by funds obtained from the Tropical Disease Study Section of the United States Public Health Service. Three months were spent in Nigeria and the experiments met with success, although there still remains a considerable amount of work to be done.

Utilizing the single cell method, Dr. Kahn with the aid of one of our recent graduates, Dr. Robert Wolf, attempted to duplicate Shaudinn's theory that the sporozoite of the malaria parasite actually penetrated the erythrocyte, but the results were negative. At the request of the New York Academy of Medicine, Dr. Kahn evaluated several volumes of evidence obtained at the Nuremberg trials of experiments performed on prisoners infected with yellow fever, typhus fever, and malaria.

Mrs. Isabella B. Grace received the degree of Doctor of Philosophy with a major in parasitology and her thesis work was done on a study of toxoplasmosis.

Dr. Emmett worked on the problem of studying safe and efficient methods of treatment in helminthic, parasitic diseases. Dr. Daniel A. Alvarez, Jr., collaborated with Dr. Cesar Fuentes, an exchange fellow from Havana University Medical College where he is professor of Experimental Pathology. They studied the effect of supersonic waves upon the growth of *Monilia candida albicans*.

Five of our fourth year medical students are working at the University of Havana during the present summer.

RADIOLOGY

The number of x-ray and fluoroscopic examinations continued to follow the trend upward, thus providing additional teaching material. The museum files, both films and lantern slides, are constantly improved by selecting new material and replacing that which is no longer useful. Clinical findings are recorded for purposes of correlation in teaching. Again it should be pointed out that the specialty of Radiology is used as an aid to nearly all fields of medicine and that instruction therefore exceeds the number of hours allotted in the published curriculum. This added teaching includes several conferences of the clinical departments and individual discussions of cases by the student with members of the x-ray staff.

The department suffered a serious loss in the sudden death of Dr. Alfred Hocker, Assistant Professor of Radiology (x-ray therapy). His advice regarding patients with cancer of the head and neck, the field in which he excelled, will be deeply missed. Dr. E. Forrest Merrill, Lecturer in Radiology, resigned to accept a position in another city. He had been relatively inactive for several years, but he had served as a valuable instructor prior to this period. The staff was strengthened by the addition of Drs. Harry W. Burnett, Jacques E. Miller, Walter A. Russell, and T. Arthur Pearson.

The evening follow-up conferences have continued to increase in popularity with our staff and radiologists outside of the Medical Center. These meetings have been valuable in graduate teaching. The four-year training program with the

Memorial Hospital affiliation paid increasing dividends in the past year, as have the liaison appointments with the Departments of Pathology and Pediatrics.

Dr. Harry W. Burnett deserves special mention for his endeavors in disseminating information regarding nuclear physics to medical students and staff members.

The number of papers published and presented before medical meetings and societies increased appreciably. Some research projects were completed, others extended and the study of several new subjects was started. The cross-indexing of all x-ray diagnoses has already produced worthwhile results, but the real value will only become apparent in future years.

Topics completed during the year include: improved method of angiocardiology, rapid method of study of the small intestine, bone changes in leukemia in children, bronchopulmonary segments, herniation of the gastric mucosa through the pyloric canal, Friedlander's pneumonia, differential diagnosis of aneurysm and mediastinal tumors, bone metastases from carcinoma of the kidneys, and a case report of benign ulcer of the greater curvature. Other topics studied by angiocardiology were pericardial effusion, congenital aneurysm of the pulmonary artery, and normal measurements of the aorta and the pulmonary artery.

Topics still under investigation include, two volumes of "Atlas of Radiographic Anatomy", polycythemia vera, re-evaluation of the meniscus sign in carcinoma of the stomach, wound healing by tissue extracts following intensive doses of X-ray therapy (in cooperation with the Department of Surgery), differential diagnosis of fractures of the squamous portion of the temporal bone, re-evaluation of x-ray therapy of Herpes Zoster, traumatic rupture of the diaphragm with herniation of the left kidney into the chest, and mediastinal emphysema. Other subjects under investigation by angiocardiology include operability of cancer of the lung, and early diagnosis of luetic aortitis (in cooperation with the Department of Medicine).

The staff is continuing to study methods of x-ray examination of the small intestine, and the first cardiac catheterization was performed late in the year. Plans have been formulated for more intensive research on the cardiovascular system in cooperation with the Departments of Medicine, Pediatrics, Physiology, and Surgery.

Financial assistance was given the investigative program by The Schering Corporation and by private donors.

SURGERY

During the past year changes in the Department of Surgery were marked by the appointment of Dr. Frank Glenn as the Lewis Atterbury Stimson Professor of Surgery in the Medical College and the Surgeon-in-Chief of the New York Hospital. Drs. Charles G. Child, III and S. W. Moore serve as assistants to the head of the department. Dr. Child is in charge of the operating rooms and Dr. Moore of the Out-Patients' Department.

The retirement of Dr. George J. Heuer from this post causes one to pause and view the fifteen-year period he served in this capacity, a period characterized by notable achievements. The journal "Surgery" devoted the March, 1948 issue to a Birthday Volume for Dr. Heuer. This volume contains thirty-one articles written by men who have received training at his hands. These articles speak eloquently of his ability as a teacher, and also show results of the Resident System introduced into the New York Hospital when he became head of the department of surgery.

There has been an improvement in the teaching of surgery to the medical students, due largely to the return of senior men and resident staff from the armed forces. In addition, men on the resident staff have been allowed to continue training without interruption and for a longer period. This increases to a marked degree not only the efficiency but excellence of work done by these men.

The second year class during the final trimester devoted one period each week to Surgery in a program outlined by Dr. Charles G. Child. They have received an introduction to the basic principles which serve as a foundation to Surgery including fluid and electrolyte balance, shock and hemorrhage, infections, anaesthesia, wound healing, and nutrition.

During the surgical trimester of the third year, the students assigned to surgery are under the guidance of Dr. Charles G. Child and act as clinical clerks on the surgical wards. Here they attend ward rounds, work up patients and follow them

not only to the operating room but during their stay in the Hospital. The entire third year class attends a noon day clinic on Friday of each week conducted by the head of the department and his associates. Afternoons are given over to the surgical specialties including Urology, Otolaryngology and Ophthalmology, both in the hospital and Out-Patients' Department. One afternoon a week is devoted to surgical pathology. On an elective basis, an operative course in animals has been given in the laboratory of surgical research. The present schedule allows the student insufficient time for following patients and the desired amount of reading. In order to provide more time, the student has been relieved of routine work on the pavilions and next year it is planned to move certain of this work into the fourth year, including surgical pathology.

The fourth year class is divided into four parts and each section spends two months on Surgery under the supervision of Dr. S. W. Moore. Each fourth of the class is then divided into two sections. One section rotates through the Surgical Diagnostic Clinic, minor surgery, orthopedic and fracture clinic, the operating rooms for instruction in anaesthesia, and the emergency room. They receive informal instruction for the entire period and then a period of formal instruction from a senior instructor covering a schedule of assigned subjects. The second section serves as clinical clerks at Bellevue Hospital where regular ward rounds and conferences are held. Here they come in contact with many fractures and much traumatic surgery. Each section spends one month on the above schedule and then exchanges places. Both sections join to attend a weekly seminar where special and timely subjects are presented by the students under guidance. These include new and recent advances in fields not covered in textbooks and found only in current periodicals.

Grand rounds formerly held on Tuesday morning and attended by the third year class in surgery have been changed to Saturday. As the operating rooms, and to a large extent the clinics, are closed on Saturday, this allows the students to attend these rounds.

Plastic Surgery under the direction of Dr. Herbert Conway is steadily enlarging its field and has ten beds available for pavilion patients. Dr. Frederick L. Liebolt is in charge of Orthopedic Surgery which has 12 beds reserved and is showing increased activity. Neurosurgery with Dr. Bronson Ray in charge has fifteen beds assigned, and on this service the surgical treatment of hypertension is being continued. In addition, surgical attack on the sympathetic nervous system for peripheral vascular disease is receiving increased attention. The above services are now established on a special basis and each have regular sessions with students. Dr. James A. Moore has been placed in charge of Otolaryngology and he has reinstated the resident program. This service is rapidly advancing endoral surgery in the treatment of deafness. The sub-department of Urology under direction of Dr. Victor Marshall operates in close conjunction with similar departments in Memorial and Bellevue Hospitals. The section of Anesthesia is continuing to provide training for physicians as well as nurse anesthetists in a rapidly advancing and enlarging field. Working in conjunction with the Department of Medicine, Dr. William DeW. Andrus has assumed charge of the Surgical Vascular Clinic.

Special effort has been made during the last year to reinstate laboratory and clinical research. An increasing number of new projects have been undertaken in the laboratory for experimental research together with continuation of several problems previously under study.

The work on tissue extract and its effect upon tissue growth and wound healing continues. A fraction has been found which inhibits both normal and abnormal cell growth. This is of particular interest to those studying cancer. Experimental work for the relief of anuria has been continued and is followed by clinical applications. This includes peritoneal and gastric lavage clinically and irrigation of an isolated loop of small intestine experimentally. Dr. John MacLean and the Department of Ophthalmology are interested in the development of techniques for the successful preservation of donor cornea grafts from the eye together with the growth of corneal cells. This is being studied under the Ledyard Fellowship. A study is being carried out jointly under the departments of Ophthalmology and Anesthesia to show the effect on intra-ocular pressure of various anesthetics. A large scale study of ulcerative colitis is being supported by the United States Public

Health Service. There is an increasing interest in vascular surgery and more particularly in congenital anomalies. Work with the Blalock operation and also coarctation of the aorta is going forward.

During the past year support for investigations has increased from \$27,500 to \$44,761. These include grants and bequests from the United States Public Health, Mrs. Alice Hogg, John and Mary R. Markle Foundation, Ledyard Fellowship, Given Fund, American Cancer Society, Wallace and Tiernan Company, Mrs. Vincent Astor, James Foundation, Alice R. Bernheim Fund, Ettinger Fund, National Council to Combat Blindness, Anuria Study Fund, and Mount Saint Alphonsus Fund.

Clinical investigations have embraced a large number of timely subjects in all sections of the department. In all 91 papers were either published or accepted for publication as compared to a total of 75 for the previous year.

CURRICULUM

After a series of meetings, the Curriculum Committee made recommendations that modify our curriculum in a constructive manner. At a meeting held on April 28, 1948, the Executive Faculty approved these recommendations and decided to put them into effect for this coming academic year. The required hours in each department will be reduced by approximately ten per cent and the fourth year will be lengthened from thirty-three weeks to forty weeks. This will provide for more free time, some of which can be devoted to elective courses. The time assigned to some of the departments has been rearranged to provide for more effective instruction. The program of elective courses has been revised and extended. The fourth year class will return on July 12, 1948, to resume work.

We look forward to our educational program under this revised curriculum with a great deal of interest. It is an experiment well worth trying out. A student should have free time in each year in order to integrate and coordinate his work, to use the library, to rehabilitate himself after illness and to follow out special interests. In the past, the required hours have been so great in most of the student's course that there has been insufficient opportunity to make possible self-development and initiative.

INTERNSHIPS

In last year's report, a new arrangement for internship placement was described. This was developed by the Committee on Internships and Residencies of the Association of American Medical Colleges. Although there were certain problems which arose in its operation, it was successful enough that it is being continued further this coming year. Certain minor modifications have been made with the joint approval and support of the Association of American Medical Colleges, the American Medical Association, the American Protestant Hospital Association and the Catholic Hospital Association. Under the chairmanship of Associate Dean Edwards, the Faculty Credential Committee on Internships has prepared the letters of recommendations for our fourth year students. The placement of these students was carried out in an effective manner and we are pleased over the types of continuing educational experiences they will receive in their intern year.

COLLEGE MAINTENANCE

The activities of the Business Office of the Medical College for the year ending June 30, 1948, have continued under the supervision of our Business Manager, Mr. Edward K. Taylor.

The total income for all purposes for the year shows an increase of approximately \$300,000.00 over the previous year for a gross income of almost two million dollars. Comparative figures for the year ending June 30, 1937 amounted to \$715,000, or an increase of \$1,300,000 over a ten-year period. The income from general endowment is approximately the same. The major changes are in restricted funds, an increase of \$650,000; New York Hospital Share of Joint Budget, \$300,000; restricted endowed funds, \$60,000; Full time Fee Account, \$90,000 and Student Fees, \$70,000.

Unfortunately, the unrestricted income has not increased. On the other hand, the cost of general administration of the increased restricted funds together with

the marked increase in the cost of supplies, salaries, heat, light and power, and other services, our general resources have in fact been greatly reduced, resulting in a budgeted operating deficit of \$100,000 a year. The current deficit will be much less than that figure due primarily to the inclusion in our general income of certain accumulated overhead charges.

Comparative figures for 1946-1947 and 1947-1948:

	1946-47	1947-48
Academic Budgets.....	\$ 850,887	\$ 879,973
Administrative and Service A/C.....	161,686	171,456
Administrative Restricted Funds.....	23,992	33,030
Special Fund for Research.....	56,675	90,000*
Restricted gifts.....	605,977	875,880
Totals.....	\$1,699,217	\$1,975,368

*Income for June estimated.

	1946-47	1947-48
Total number of orders placed.....	8,168	8,766
Total number of checks issued.....	14,470	18,100

Payrolls:

Number of individuals paid from budget:

All College.....	156	
Joint Departments.....	204	360

Individuals paid from Special Funds:

Federal Grants.....	54	
Other grants, gifts and special funds.....	281	335

Total number of salaries paid monthly.....	695
Total annual payroll (estimated on basis of May, 1948).....	\$1,573,813

During the year, 459 employees were added to the payroll while only 311 left, a net increase of 148 employees.

There were a total of 52 injuries to employees during the year.

Veterans Program:

Payments from the Veterans Administration are much better than in prior years. Our main problem is the termination of entitlement for individual students and the handling of the records for short courses.

Total number of veterans entered, or reentered into training during the year, 297 (116 of these veterans completed their training or exhausted their entitlement during the year).

Veterans' tuition and fees billed during the year: Regular students, \$90,436.82; Graduate students, \$1,847.00.

Student Loans:

New loans issued and collections on past loans were minor during the year. We anticipate an increasing demand for loans during the next few years due to the termination of Veteran Administration aid. Funds available for this purpose now total \$58,693.41.

Maintenance and Repairs:

A general painting program was carried out last summer and numerous repairs undertaken. The buildings in general are now in better condition than at any time since the war. Outside sidewalks were replaced where necessary.

A major structural change was made on the eighth floor of "C" Building to house additional animal quarters for a research project sponsored by the U. S.

Public Health Service for the Department of Medicine. Costs of heat, light and power continue to mount. The total costs for these services for the year amounted to \$53,000 compared with \$43,800 for last year.

Surplus Property:

An effort was made to obtain desirable surplus property from Federal Agencies. A considerable amount was available, much of which was unsuited for use in this institution. The quantity of scientific apparatus available was disappointing. Following is a breakdown of the types of materials received. The dollar values are approximate and are a conservative estimate of their actual value. The total costs incurred—transportation, handling, traveling expenses and additional labor—by the College in obtaining this material was \$4,150.74, all of which has been allocated to the various departments and others to whom this material has been transferred. Furniture, \$4,735; laboratory equipment, \$34,205; drugs and chemicals, \$11,860; surgical instruments, \$3,400; glassware, \$3,120; electronic material, \$189,100; teaching aids, \$570; maintenance and shop equipment, \$19,350; office machines, \$1,985; stationery, \$7,300; Fire Fighting and Miscellaneous Equipment, \$1,350. Estimated value of this property amounts to \$276,975.00.

STUDENT HOUSING:

The students are continuing to be housed in the temporary dormitories provided through the Federal Public Housing Authority. This project has proved to be satisfactory both from a financial and a housing point of view.

Operating figures for the current year are as follows:

Total income from rentals at \$21.00 per month per student.....	\$35,813
Total operating costs.....	35,394*
Surplus.....	\$ 419

*Month of June estimated.

Included in operating costs: \$2,700 reimbursed to Cornell University Medical College against \$15,000 original costs of furniture and special equipment. \$7,200 reserve for repairs and maintenance. (Amounts approved by Federal Public Housing Authority).

According to our contract with the Federal Public Housing Authority, any operating surplus remaining after five years of operating is to be returned to the Federal Government.

SUPPORT ACTIVITIES

During the year July 1, 1947 to June 30, 1949, our Medical College has received \$875,880.15 in restricted gifts for research and education purposes as compared to \$605,977.45 received in the previous year. These represent gifts and grants from industrial concerns, foundations, private donors, and from governmental agencies. Throughout the description of the work of the departments, the sources of these funds have been enumerated. We are very grateful for this continued support and consider it a vote of confidence in the work we are doing.

It is interesting that the amount received for research and special educational projects is within a few thousand dollars of our total academic budget. Such funds are only of indirect benefit to our instructional work and in some instances can actually be a drain on the academic budget. We have endeavored to see to it that we have not accepted funds which we cannot put to effective use. Support of this kind is easily available but it has been extremely difficult to raise funds for the support of our basic educational program. While the public has been educated to giving to special fields of research, i.e., cancer, poliomyelitis, cardiovascular disease, etc., they have not been given an appreciation that the medical colleges of this country must be adequately supported if work in these special fields is to be done properly.

The following statement was prepared by Dr. Donald Anderson, Secretary of the Council on Medical Education and Hospitals of the American Medical Association and myself as Chairman of the Executive Council of the Association of American

Medical Colleges, for another purpose but it states the problem. "Medical schools are faced with the urgent problem of finding sufficient funds to conduct satisfactory programs. The quality of medical education determines the quality of medical care and the question of providing the medical schools with adequate support is one of basic importance to the nation's health. This problem is more urgent for the forty-two privately supported medical schools but is of almost equal concern to the thirty-five tax supported schools.

This need is largely the result of inflation in which endowment income and the purchasing power of the dollar have been markedly reduced. It concerns primarily the basic operation of medical schools. Research funds for special and restricted projects are abundantly available but these do not pay for the basic costs of educating medical students. Tuition charges, which now only supply about 26% of the total cost, have been raised by most schools but the increased income thereby secured has supplied only a fraction of the need. Further significant increases in tuition do not seem advisable if the opportunity for medical education is not to be restricted to the well-to-do. A recent poll revealed that the medical schools estimate that they will require an additional fifteen million dollars annually to stabilize their operations in maintaining a satisfactory standard of medical training.

Medical educators must determine whether this money can be obtained from voluntary sources because otherwise they will probably be unable to avoid accepting Federal subsidy."

ALUMNI ACTIVITIES

For the year ended in March, 1948, Dr. Willis M. Weedon, '19, served as President of the Cornell University Medical College Alumni Association. The other officers were: Dr. William D. Stubenbord, '13, Vice President; Dr. Mary M. Crawford, '07, Secretary; and Dr. Paul Reznikoff, '20, Treasurer. Dr. Guion, '17 and Dr. Weedon served as the Alumni representatives on the Medical College Council. Miss Mary E. Gleason has continued as full-time secretary in the office of the Association in the College. A sum of \$6,103.00 was raised for the Alumni Fund. Dr. David N. Barrows, '12 and Dr. Weedon have given generously of their time in editing the Alumni Quarterly and Dr. Barrows has been chairman of the Alumni Fund drive.

On March 11, 1948, the 50th Anniversary of the Medical College was appropriately commemorated. The program began at 9 a. m. with demonstrations and clinics throughout our departments. A luncheon was graciously provided for 210 of our guests by the New York Hospital in the Nurses' Residence. Immediately following the luncheon, the annual business meeting of the Alumni Association was presided over by Dr. Weedon. Many of the early graduates attended, including three members of the first graduating class of 1899. Dr. and Mrs. Lewis A. Conner attended the luncheon as guests of honor. Afternoon demonstrations, clinics and scientific exhibits carried on until 5 p. m. The following officers were elected for the coming year: Dr. William A. Stubenbord, '31, President; Dr. Horace S. Baldwin, '21, Vice-President; Dr. Alphonse E. Timpanelli, '36, Secretary; Dr. Paul Reznikoff, '20, Treasurer.

The annual banquet followed at the Hotel Roosevelt with an attendance of 490. The members of the fourth year class were guests of the Alumni Association. Trustee Larry Gubb discussed the projected university fund raising campaign. The Dean spoke of the Medical College and its present and past activities. There was a short program of entertainment by some of the Alumni and dancing continued until 1 a. m.

Dr. Weedon and Dr. Stubenbord have been appointed as Alumni representatives on the Medical College Council for the coming year. I wish to express appreciation for the work of the Alumni in entertaining the entering first year students on the evening of October 3, 1947, and for the two afternoon teas given the second and third year students during the year. I am very grateful for the help and support I have received from the Alumni and for their intelligent interest in our problems and needs.

DEVELOPMENT AND NEEDS

In the early part of this academic year with Dr. Preston A. Wade, '25 as Chairman of a Steering Committee, the drive for funds for a new Student Residence was

organized under the guidance of the firm of Reuel Estill & Company. After plans were well under way, it was decided to suspend this drive and to incorporate the needs of the Medical College with those of the University as a whole being worked out by the Greater Cornell Committee. Dr. Wade has been made the representative of the Medical Alumni in the Administrative Committee and Dr. Connie M. Guion, '17 the representative of the Faculty. The announced plans for this drive include a sum of \$2,500,000 for the Medical College out of a total sum of \$12,500,000.

The need for a student residence still remains one of our great problems. An agreement has been worked out with the New York Hospital whereby we will exchange the plot of ground which the University owns on the corner of 71st Street and the East River Drive for one which the New York Hospital owns on the northwest corner of 69th Street and York Avenue. The latter would be the site for a future student residence. We have been asked to vacate and move the temporary building we are now using for student housing on the East River Drive as soon as the new building projected for this area is undertaken. As yet we have not been able to provide for the housing of these 60 students. In looking forward to the building of a student residence on the site on the northwest corner of 69th Street and York Avenue, I would strongly urge that the possibility be explored for combining a residence and recreation center to accommodate the needs of our entire center, the Medical College, the New York Hospital, the Memorial Center, and the Rockefeller Institute for Medical Research.

The problem of adequate support of our services at Bellevue Hospital still remains. We can see our way clear to maintain our postgraduate teaching program on the Second Medical Division for another year. This has been made possible by an additional grant from the Kellogg Foundation. An additional sum of \$50,000 is needed each year for proper support of both the medical and surgical divisions.

On July 1, 1948, Dr. Thomas P. Almy was appointed James Ewing Associate Professor of Neoplastic Diseases (Medicine). He will serve as chairman of the Interdepartmental Committee on Neoplastic Disease which will be made up of Drs. Almy, Kidd, Temple, Glenn, Frank W. Foote, Bayne-Jones, and Hinsey. This committee is charged with the responsibility of furthering teaching and investigations in the field of neoplastic diseases in the joint institution, of conducting interdepartmental conferences throughout the academic year on the various aspects of cancer with chief emphasis on the clinical manifestations, and of fostering other departmental activities. It will enlist the aid and interest of workers throughout the institution who can contribute to the cancer problem, and will invite the fullest possible participation in the work of the cancer program by the staff and facilities of the Memorial Hospital. Dr. Almy's appointment was made possible by the grant from the New York City Cancer Committee. The Committee will have at its disposal about \$25,000, a grant from the U. S. Public Health Service, for the strengthening of existing departmental activities, for the initiation of new enterprises, and for the support of Dr. Almy's work.

On April 19, 1948, the dedication of the new Sloan-Kettering Institute took place at the Memorial Center. Work is progressing in the new building with a well-developed and able staff under the direction of Dr. C. P. Rhoads. The new James Ewing Hospital is being constructed by the City of New York on First Avenue between 67th and 68th Streets. The appointment this last year of Dr. Alexander Brunschwig as Professor of Clinical Surgery at Cornell and as head of the Gynecological Service at Memorial Hospital, and of Dr. Rulon Rawson, as Associate Professor of Medicine at Cornell and in charge of the Medical Service at Memorial Hospital are noteworthy additions to the staffs of both institutions. A committee of the Memorial Board of Managers has been studying the furtherance of greater integration between our two institutions. A new innovation to our undergraduate teaching program is the establishment of an elective externship or clinical clerkship for our fourth year students at the Memorial. Although progress has been made in cementing the integration of our relationship with Memorial, I would recommend every attention on our part to its acceleration.

Throughout the year, the Joint Administrative Board through the leadership of its President, Dr. Bayne-Jones, has been studying and developing plans for a Diagnostic Clinic and at its meeting on June 18, 1948, it approved in principle its

establishment by a group composed of members of the professional staff of the New York Hospital.

Negotiations have been carried on for the affiliation of the Hospital for Special Surgery with our Center. Plans are being formulated for a building on the plot across 70th Street from the Lying-In Hospital extending along the East River Drive between 70th Street and 71st Street.

The Joint Administrative Board has approved in principle the affiliation of the New York Hospital-Cornell Medical Center with the medical preparedness program of the Department of the Army for sponsoring a 1000 bed Army General Hospital as an activity of our center. This approval in principle means expression of primary interest in affiliation with the medical preparedness program of the Army, but at this time does not extend to the signing of a letter of intent or agreement.

The Board of Governors of the New York Hospital at its meeting held on May 4, 1948, approved the establishment by the Hospital of a Catastrophe Unit, in whose operation the Medical College will cooperate. Such a unit, for which plans have been worked out, would be organized, trained and equipped to handle casualties among civilians as well as military personnel in case of catastrophies from bombing, sabotage, bacteriological warfare, gas warfare, or natural occurring epidemics, or extensive fires.

During the year, we have had an Isotopes Committee which worked under the chairmanship of Dr. Harold Temple. This committee sponsored and arranged two series of lectures presented by Dr. Harry Burnett, a member of the staff in Radiology, in which our students and staff were given the elementary principles of the utilization of radioactive isotopes, of nuclear physics, the effects of the atomic bomb, and the therapy of injuries received in such bombing.

In going over the reports from our various departments, I have been impressed by the increasing tendency for cooperative activity in both teaching and research. It is gratifying to see this team-play at work and to see how effective it can be.

We have enjoyed the continued cooperation of the authorities of the New York Hospital with Mr. William H. Jackson serving as President of the Society of the New York Hospital and its Board of Governors. Mr. Murray Sargent, retired as Director of the New York Hospital on January 1, 1948. We had a long period of active cooperation and pleasant association with him. His work was taken over by Mr. L. G. Payson who has served as Acting Director. Some time this fall, Dr. Harry N. Pratt, will become Director of the New York Hospital. For the past two years, Dr. Pratt has been Administrator of the Memorial Hospital where we have had an opportunity to work with him.

It is a pleasure to express my sincere appreciation to you, to the members of the Board of Trustees, the Medical College Council, the Joint Administrative Board, our Alumni and Staff for support and cooperation. It has been a pleasure to work with Dr. Stanhope Bayne-Jones as the President of the Joint Administrative Board.

JOSEPH C. HINSEY,
Dean, Cornell University Medical College.

APPENDIX XI

REPORT OF THE DEAN OF THE NEW YORK STATE VETERINARY COLLEGE

To the President of the University:

SIR: I have the honor to report herewith on the activities and condition of the New York State Veterinary College during the fiscal year ended June 30, 1948.

Except for the fact that we had no fourth year class and no graduates in 1948, it was a normal year. The lack of a graduating class this year was a result of the manner in which the war-time accelerated program was discontinued in 1945. The registration, not counting graduate students, was 143. Since none were graduated and fifty additional students will matriculate in the fall, we will return next fall to a full four-year schedule with about 190 students. In addition we have about fifteen graduate students who are taking their work in the College.

ADMISSIONS PRESSURE

The pressure for admission to the college continues unabated. The number of applicants was only slightly fewer this year than last year which probably was the peak of the postwar load. Approximately 650 applicants must be screened in order to select the 50 that our allotment permits. About half of these are residents of states other than New York. Since we allotted 40 places to New York State applicants and 10 to the out-of-state group, it follows that we will be able to accept about 1 in 10 of the former and about 1 in 30 of the latter.

INCREASE IN REQUIREMENTS FOR ADMISSION

During the past year approval of the faculty's recommendation to increase the admission requirement in 1949 was obtained. The requirement of one year of college work, effective since 1933, has been increased to two years. This is in line with a general movement in American veterinary colleges. The extra year's work is intended to provide a better educational background for members of the profession. This is needed in order that they may have a better grasp of the problems of society, and can better serve the communities in which they will work.

NEWLY ORGANIZED VETERINARY SCHOOLS IN THE UNITED STATES

New veterinary colleges continue to be organized throughout the country. This is partly due to the recognition of the need for more educational facilities to supply greater numbers of veterinarians, but the more immediate cause is pressure from applicants who have found it impossible to obtain admission into any of the existing schools. With few exceptions, young men who have desired to study veterinary medicine in recent years and who have lived in states that did not have a veterinary school have found themselves frustrated. This is because all of the existing schools are state supported and thus have found it necessary to give preference to residents of their own state almost to the exclusion of others. The better-than-average student with a satisfactory background of experience with livestock who lives in a state which supports a veterinary college generally can obtain admission, but many outstanding boys, living in states without such colleges, are not successful.

For a period of twenty years prior to 1945 there were but ten veterinary colleges in the United States. For the first decade of this period these schools, few as they were, had great difficulty in finding enough students to justify their existence. During the second decade all were flooded with applicants and were forced to restrict admissions. One new school was organized in 1945, two in 1946, two in 1947 and there will be two more opening in the fall of this year. There is a strong probability that several more will be organized in 1949. As of the fall of this year, 17 schools will be in operation. All of these will be crowded to capacity. In contrast to 1929, the low peak in veterinary student enrollment in this country when the total number was less than 500, there will be approximately 2,800 students this fall and when the new schools are in full operation in 1952, this number will be

approximately 3,500. There is no doubt but that the country can absorb many more veterinarians than now exist, particularly under present economic conditions when animal owners are prosperous and are demanding unusual service, but the question may well be asked whether we are not over-compensating for the present shortage.

A SECOND VETERINARY SCHOOL FOR NEW YORK STATE

The New York State Legislature last spring enacted legislation creating a State University. A part of this legislation authorized the creation of a second veterinary college to be established in the New York City area. The pressure for the creation of this new school came from the New York City area, I understand, and it certainly was not based upon any survey of the needs for such a school either in that area or in the State in general. Apparently it originated in the same way that many of the new schools in other states have come into being, i.e. through pressure from many who seek a veterinary education unsuccessfully at present.

It cannot be successfully argued that there is any serious shortage of veterinarians in New York State now nor is there likely to be one in the immediate future. Least of all is there any shortage of small animal practitioners. A school located in the metropolitan area could have no appreciable clinics except of small animal household pets. As practitioners it could not turn out any except small animal specialists. A veterinary school with a balanced, well-rounded clinical program cannot be operated in a large city. Such a school could not be approved by the Council on Education, of the American Veterinary Medical Association, unless it set up facilities in some rural area for clinical teaching and made some arrangement to move its students there for a portion of their training program.

For many years New York has been contributing more than its share in the education of veterinarians for the entire country. For years, many New York residents, after receiving their education in their own state, have been locating in other parts of the country for their life's work because the profession was less crowded elsewhere. Now that many other states are assuming a share in the national responsibility for education in this field it is only reasonable to assume that fewer New York trained men will be leaving the state. Operating at the present level, the Veterinary College at Cornell could replace the entire professional personnel of the State in about twenty years providing all who were educated here were to remain in the state. These facts do not indicate that this state has need of another veterinary college. If the state can afford additional investment in veterinary education and research it would be much better to build up one strong institution rather than to dissipate its investment in two institutions, neither of which would be likely to return as much on the investment because of the duplication involved. The acute shortage of teaching personnel, referred to below, is another factor which should receive careful study in this connection. When the Board of Trustees of the new State University is acquainted with these facts, it is hoped that they will be convinced that it would be both unnecessary and unwise to establish a second veterinary school in this state.

THE SHORTAGE OF TEACHING PERSONNEL IN VETERINARY MEDICINE

The creation of so many new veterinary colleges in this country within the last three years has created an unprecedented shortage of adequately trained teaching personnel, a situation which will exist for a number of years. The number of graduate students in veterinary medicine has been, and still is, small. Recruitment has been very difficult because of the great financial inducements offered to recent graduates by private practice, industry, public health, and other governmental services. The stipends which can be offered by educational institutions in the form of fellowships and assistantships are very small compared to those offered by other employment. The average age of graduates in veterinary medicine since the war has been advanced by four or five years. Many are married and have families when they graduate. Such men, even though they have the ability and the desire to do graduate work, must provide for their families and do not have the means to supplement adequately the stipends which Universities offer.

Most of the veterinary schools are meeting this situation by sharply advancing

the level of compensation of young part-time graduate students. This college has been at considerable disadvantage in competing with several other colleges in this respect. In the budget requests for 1949-1950, we are asking that the salaries of all assistants and internes be increased for this reason.

Although many of our men have had attractive offers from other institutions in recent years, we have done as well as any and better than most in our efforts to hold our key men. The long-standing reputation and prestige of the New York State Veterinary College and Cornell University have been important in this respect. Of great assistance also has been the excellent cooperation of the State Administration which we have enjoyed in meeting personnel emergencies. The University, too, has provided temporary financial assistance in several instances when immediate help in meeting such crises could not be obtained from the State budget.

FORTIETH ANNUAL CONFERENCE FOR VETERINARIANS

The Annual Conference for Veterinarians, an important part of our annual program for forty years, was held in January as usual. This is a three-day short course in which our faculty, aided by a staff of extramural lecturers, attempts to present to veterinary practitioners many of the new technical advancements in the field. The 1948 Conference was highly successful. The registration was 318, of which about 80% were veterinary practitioners from New York State. The remainder were from other northeastern states; a few were from more distant points. This short course is recognized as one of the outstanding ones of the country.

FACULTY CHANGES

Two of the senior faculty members reached retirement age and were elected Professors-emeritus during this year. Earl Sunderville, Professor of Anatomy, and Head of the Department of Anatomy, retired in February after serving the College with distinction for more than forty years. Howard J. Milks, Professor of Small Animal Diseases and *Materia Medica*, and Director of the Small Animal Clinic, retired at the end of the collegiate year. Dr. Milks also had served with distinction for more than forty years.

Chas. E. Hayden, Professor of Physiology, died unexpectedly in February. Dr. Hayden had served the institution well for about 40 years and was due to retire in 1949. Alex Zeissig, who had been on leave of absence while serving as consultant on rabies control to the New York State Health Department since December, 1945, and who previously had been Associate Professor of Bacteriology, resigned at the beginning of the fiscal year in order to continue with his duties in the Health Department. A. G. Danks, Professor of Surgery, has presented his resignation effective this summer, and will assume the duties of Director of the Clinics in the new veterinary college of the University of Illinois this fall.

E. P. Leonard, who had been in private practice in New Jersey, was appointed Director of the Small Animal Clinic and Professor of Small Animal Diseases. He assumed his duties in January. James A. Baker, formerly on the staff of the Rockefeller Institute for Medical Research, was appointed Professor of Bacteriology and began his duties last fall. Robert W. Dougherty, formerly of Washington State College was appointed Professor of Physiology and will assume his duties here next fall. Carolyn F. Sprague was appointed Acting Associate Professor of Physiology in February. Changes in the ranks of Internes, Assistants, Instructors, and Assistant Professors were too numerous to mention here.

CLINICAL AND LABORATORY SERVICES

For many years this college has rendered services to the veterinary practitioners and animal owners of the state through diagnostic laboratories. The general diagnostic laboratory in Ithaca has operated continuously since the college was founded 52 years ago. In 1921, a special laboratory for the diagnosis of poultry diseases was opened in Ithaca, and this was supplemented in 1925 by the establishment of a branch laboratory in Farmingdale, on Long Island. In 1946, two additional diagnostic laboratories to serve the poultry industry were established—one in East Aurora and another in Kingston. In the same year the College entered into a

contract with the State Department of Agriculture and Markets whereby it undertook to establish and operate special laboratories for the diagnosis of bovine mastitis in East Aurora, Kingston, Canton, and Farmingdale. A similar laboratory had been operated unofficially in Ithaca for several years previously. This year financial support for a sixth laboratory has been provided, and it is being prepared to begin operation at Earlville, in Madison County, this summer.

All of these laboratories serve as educational centers and they bring laboratory assistance in the making of specific diagnoses of animal diseases within reasonable distance of all livestock areas of the state. They are heavily patronized and are important factors in keeping disease losses in the state within reasonable bounds. It is true, of course, that scientific knowledge in veterinary medicine is far ahead of its utilization in the field. Bringing scientific help within easy reach of veterinary practitioners and animal owners is achieving its more general utilization.

During the last several years, the general diagnostic laboratory in Ithaca has been faced with an unusually heavy load in handling the large numbers of specimens submitted for the diagnosis of rabies. Previous outbreaks of rabies in this state have affected dogs, primarily, with cases in other species, including man, being due to dog bites. The present outbreak which is now about three years old affects wild animals, especially foxes, primarily, and cases in other animals are traced to this reservoir. Since a large part of the dogs in the affected regions have been immunized against the disease, we now receive few dog's brains for examination but large numbers of fox and cow heads are received. More than 400 positive cases in cows were reported during the last year.

The College clinics continue to be well patronized. These are operated primarily for the teaching of students. The final tabulations for the past year have not yet been made but it appears that the number and variety of cases will be approximately the same as for recent years. We are fortunate in having adequate numbers of all domestic species represented. Our students thus become familiar with the common ailments of all animals that they are likely to encounter in practice.

RESEARCH ACTIVITIES

No attempt will be made here to discuss the research activities of the staff except in very general terms, since space will not permit. A large program is being carried on with bovine mastitis, a disease which has large economic implications. This program is centered in Ithaca, but data collected in the regional laboratories is being utilized. Certain aspects of induced immunity to Bang's disease of cattle are being studied. A new program of investigation of virus diseases of animals is being undertaken. Important diseases of chickens and turkeys are being studied. Sterility and breeding problems of dairy cattle are under investigation. Several animal parasites and parasitic diseases are the subjects of research. Problems of metabolism and other physiological problems concern certain members of the staff. The scope of the research activities are rather broad and are shifted from time to time, the better to deal with special new problems that arise.

THE PHYSICAL PLANT

Renovation of the Small Animal Clinic building was begun near the end of the year and it is hoped that it may be completed before the end of the summer. This building, completed in 1910, was not well designed for its purpose. The alterations include a waiting room for patients, two new examination rooms, a new X-ray room, general repairing of the interior of the building and the installation of a complete new set of kennels. The latter will be constructed of heavy glass slabs joined with stainless steel channels. It is expected that these will go far toward eliminating the odors which have always permeated the building.

A new operative surgery room has been completed in the Farriery Building. This is intended for the teaching of students in the principles of surgery. In the future this work will be done in this room rather than in the general surgery where patients are handled.

An appropriation has been obtained, plans have been drawn and it is hoped that contracts may soon be let for the construction of a Virus Isolation Building to be located on the College Farm. This building will contain 16 units in which any

kind of animals can be kept in strict isolation from each other. Only with such facilities is it possible to carry on extensive research with some of the highly contagious virus diseases of animals. Work with Newcastle disease and infectious bronchitis of poultry, and with canine distemper and some of the common encephalites of dogs is being held up for lack of these facilities.

In view of the fact that there is no immediate prospect for the replacement of James Law Hall, provided for in the post-war building program of the State, we are asking for considerable sums in the next state budget to repaint the interior woodwork, to enlarge the library stacks, and to provide better illumination in the reading room of the library and in the anatomy laboratory. We expect to ask also for a Quonset-type building to be erected in the court of James Law Hall to provide decent quarters for the animals used in the Department of Physiology and which are now housed in highly unsatisfactory quarters in the basement.

WILLIAM A. HAGAN,
Dean of the Veterinary College.

APPENDIX XII

REPORT OF THE NEW YORK STATE COLLEGE OF AGRICULTURE AND THE CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION

To the President of the University:

SIR: I have the honor to submit the report of the New York State College of Agriculture and of the Cornell University Agricultural Experiment Station for the fiscal year 1947-1948.

There has been no reduction, during the past year, in the worldwide demand for food, fibre, and other important products of the farm. New York State farmers have been called upon to maintain and, in some instances, to increase the unprecedented production of the wartime years. The research and extension personnel of the College and the Station have responded to repeated requests from farmers and farm organizations for more information on improving production with a minimum of labor and without materially increasing acreages or damaging the productive resources of the land. The year has also been characterized by continued pressure for the training of young men and women in agriculture, at both the undergraduate and graduate levels.

RESEARCH

Farmers, in attempting to meet the postwar problems of agriculture, are pressing for increased research in practically all of the subject-matter fields encompassed by the Experiment Station. The following brief progress reports will serve to illustrate some of the research under way during the past year. A more complete coverage of the program is contained in the Annual Reports of the Colleges of Agriculture and Home Economics to the Governor and the Legislature.

As in other segments of the economy, farm costs are constantly increasing. Consequently, emphasis has been given to ways and means of more efficient labor utilization, increased mechanization, and other methods of lowering costs of production. Automatic watering systems have been developed for the poultry industry. The equipment requires little cleaning, an abundant supply of clean water is always present for the birds, and chore time for watering can be reduced by 25 to 90 per cent, depending upon the equipment formerly used. An automatic mash feeder has been designed and constructed. If this device is satisfactory under farm conditions, it is estimated that chore time for this job can be reduced 25 per cent.

An egg washing machine has been developed that will enable two persons to wash, dry, and pack five cases of eggs an hour. The machine thoroughly cleans the

eggs without lowering their keeping quality or damaging their exterior or interior quality. Furthermore, the "bloom" is not removed from the egg shell. Since the new method is much faster than hand-cleaning, thousands of hours of labor will be saved by poultrymen and their wives, thereby aiding in reducing the cost of eggs to consumers.

Designed to relieve farmers of the task of chopping ice in stock watering troughs, a float-type, electric, thermostatically controlled heater has been tested with success during the past winter. Although the new "de-icer" does not keep the entire trough free of ice, it maintains a hole large enough for stock watering even in sub-zero temperatures. Satisfactory tests have also been conducted with a new, easily installed plastic heating tape that protects water pipes from freezing in farm buildings. The new tape shows further promise of preventing ice formation on roof edges in the winter.

The rapid development of weed control by chemicals, heat, and other methods, is assuming the proportions of a new science. Further progress has been made with chemicals, such as 2,4-D, common salt, ammonium thiocyanate, and petroleum oils. Many of these materials are selective in their effects upon plants. It appears very probable that farmers are going to be able to make further savings in weed-control costs in the near future.

Developments in new and improved fungicides and insecticides, including methods of application, are keeping pace with chemical weed control. New laboratory techniques have been devised for the rapid evaluation and testing of materials that have insecticidal properties. When one considers that many thousands of compounds may be tested and discarded before a good one is found, the savings in research costs made possible by the improved techniques are tremendous.

One new insecticide, called Parathion, is proving of great importance to florists. A treatment requiring many hours of hard labor by spraying is accomplished in a few minutes' stroll through the greenhouse with an aerosol bomb containing the chemical. The insecticide controls scores of important insect pests with no injury to many of the most common greenhouse crops. The material is now being tested on other crops grown on farms.

The application of fungicides and insecticides by aircraft is now an established business. Research is under way, in cooperation with aircraft operators, on improved methods of application, formulation, and timing. Helicopters have an advantage in maneuverability over the fixed-wing type of plane, but this must be demonstrated in results on dusted crops. Another promising development is the use of concentrated sprays applied at the rate of a few gallons per acre instead of by the hundred. The concentrates can be applied more evenly than dust from aircraft, and the danger of drift is minimized.

Aided by research, the artificial breeding of dairy cows has made further progress. During the current year, about 150,000 dairy cows, or about 11 per cent of the total in the State, will be bred artificially. An analysis of records up to the present time shows that cows sired through artificial insemination are now producing about 70 per cent more than the average New York cow. There has also been a striking increase in butterfat production. Results of this character are making it more nearly possible for dairymen to meet rising production costs.

Consumers may soon note an improved flavor, body, and texture, in Cheddar cheeses and processed "American" cheese. A new starter has been discovered, that when planted in cheese during manufacture, will cause the rapid development of a superior Cheddar flavor. The use of this starter will cut the time needed to develop the desired flavor by about one-half. Furthermore, the improved cheese is more satisfactory for cooking since the flavor will carry over better in cheese dishes.

Research on the modified-atmosphere storage of apples has paid handsome dividends to the New York operators who installed and used this improved method of storing fruit. Ordinary cold-storage McIntosh apples brought from 25 cents to a dollar a bushel in New York during April and early May, 1948. McIntosh from controlled-atmosphere storages were bringing from \$4.00 to \$4.75 in the same market. Consumers were willing to pay more for these apples because of their improved appearance and quality.

Density-of-stand studies with hybrid grain corns have yielded some very interesting results. The medium and high stand densities (approximately 15,000 and 18,000

plants per acre respectively) gave economically higher yields than the low stand density (approximately 12,000 plants per acre). Universal acceptance of these optimum spacing results will increase the yield at least 10 per cent on 700,000 acres of corn in New York. If only 20 per cent of the farmers follow this improved practice, the net gain at present corn prices would be about \$2,000,000.

EXTENSION SERVICE

During the past few years steady progress has been made in coordinating and integrating the administration of the State Extension Service. This has been accomplished in part through regular monthly meetings of the three groups of state agent leaders; the monthly meetings of the committee in charge of the Older Rural Youth work; and the functioning of the type of farming and commodity committees.

Probably the Extension Service in New York State should have a program or a plan on public relations. Nevertheless, this matter is very much in the minds of extension workers, and most staff members operate in that field. The results are evident.

Extension relations with the State Departments of Education, Conservation, Commerce, Health, Labor, Agriculture and Markets, with the State College of Forestry at Syracuse University, the federal agencies of the Soil Conservation Service, the Farmers' Home Administration, and the Production and Marketing Administration, and with the eight major farm organizations represented in the New York State Conference Board of Farm Organizations, are excellent.

This happy relationship did not always exist. It has been developed through the planned effort of the deans and directors, as well as other staff members over a long period of time. It has been based on the premise that good public relations are based on the desire of people to work together and like one another. In this State, the heads of agencies and organizations are personal friends.

During 1947 the Policy Committee on Extension Studies continued to promote and guide the program of extension studies in the State. Established in January 1946 by the Director of Extension, this committee was reconstituted by him for 1947-48 with the following statement to the members: "The chief functions are: to develop a program of extension studies in agriculture and home economics; to advise extension administration as to specific studies needed; to discuss the kind of approach feasible in attacking specific problems and the technical consultants best equipped to assist; to suggest personnel for the small working committees set up for each study. The Policy Committee itself does not make studies but some of the members serve from time to time on the smaller working committees."

Progress has been made in gathering facts on available resources in various departments on the Cornell campus as to information and data on hand, research equipment, and personnel with experience and skill in methods of educational research.

Interest is spreading, as evidenced by the organization late in 1947 of a county agricultural agents' committee on extension studies, and their requests for help in several investigations. An increased number of staff members at the Colleges and in the field have called upon the Policy Committee for assistance in setting up informal studies, determination of suitable sampling methods, and construction of questionnaires and other evaluation devices. There is considerable evidence that the establishment of the means for developing a state program of evaluation, in co-operation with the division of Field Studies and Training, has stimulated a scientific approach to many problems of program planning and teaching methods.

Fifty undergraduates in the College of Agriculture who propose to enter the Extension Service are advised twice annually regarding courses and experience needed. The Student Extension Club is given advisory service. A new course was introduced in the Department of Extension Teaching, designed particularly for prospective extension workers. This is in addition to the existing courses of which several are especially designed to teach methods, skills, and organization of extension work.

The Extension Service Summer School for the Northeast was held at Cornell with 69 workers from 22 states. In 1948 six courses will be offered. This entire program of training is cleared through a two-college committee called "Advisory

Council in Extension Education." A new service to extension workers who wish to do graduate work is now offered, and in 1947 fourteen students were candidates for advanced degrees from 12 states.

Major agricultural problems, to which the Extension Service gave special attention during the past year, have been those arising from higher and hard-to-control costs of production. Major program emphasis in all subject-matter departments was placed on efficiency in the use of labor, land, feed, machinery, and buildings. An excellent example of a coordinated teaching plan, with the foregoing aims in view, was developed by the College Dairy Committee. This timely program was enthusiastically accepted by county agents and county dairy committees, and is in full swing.

Although hampered by crowded conditions on the University campus, every effort has been made to provide facilities and aid to various groups who want instruction or consultation on campus. There are many reasons for doing this and the need is growing. Groups involved in this important extension of the influence of Cornell University include not only our own employees stationed at outlying centers, and groups of cooperating organizations both public and private, but also representatives of numerous industrial concerns who manufacture articles that farmers buy. Plans have been made for a conference building, but start of construction must wait.

There has been no appreciable reduction in the number of foreign visitors, many of whom are directed to Cornell by the Office of Foreign Agricultural Relations of the United States Department of Agriculture. Most of these visitors, whose average stay on the campus is from two to three days, are teachers or research workers in European or South American universities. Some are government officials with special agrarian interests or duties. A few are industrialists engaged in producing farm supplies or in food processing or similar enterprises. All come with well defined queries or specialized interests. It's a time-consuming job for the professional staff, but is deemed thoroughly worthwhile and is certainly much appreciated by our visitors.

APPROPRIATIONS

The State appropriations for the fiscal year 1947-1948, as compared with 1946-1947, show a net increase of \$236,669 in personal-service, including salary increases, new positions, temporary services, and accessory instruction. Funds for maintenance and operation are increased by \$91,450. Appropriations for equipment replacement amount to \$50,000, and for equipment additional, \$137,814.28.

The Legislature of 1947 appropriated \$51,500 for repairs and rehabilitation of buildings and for land drainage.

For further support of the farm bureau and 4-H club work in the counties, the sum of \$20,750 was appropriated.

The Legislature made a special appropriation of \$89,000 for research and extension in quick soil tests, livestock-insect control, potato- and vegetable-insect control, land- and soil-classification surveys, florist crops, ornamental nursery crops, the establishment of biometric services, and for the maintenance of an agronomy research farm.

The Federal appropriations for teaching were the same in amount as those for the year 1946-1947. The Bankhead-Flannagan appropriation for extension was increased by \$6,510. The Experiment Station received the first increment under the Research and Marketing Act of 1946 in the amount of \$45,311.37. In addition to this, the sum of \$25,000 was assigned to the Cornell Station for one year under Section 9b3 of the Act.

COUNCIL FOR THE NEW YORK STATE COLLEGE OF AGRICULTURE AND THE AGRICULTURAL EXPERIMENT STATION

Upon the nomination of the New York State Conference Board of Farm Organizations, the Board of Trustees elected the following as members of the Council for a three-year term beginning July 1, 1948: Clayton G. White to succeed J. C. Corwith, and Donald Kuney to replace John B. Clark.

Upon the nomination of the President and the Dean of the College of Agriculture,

Frank W. Beneway was elected by the Board of Trustees to succeed Monroe Babcock for a three-year term beginning July 1, 1948.

By virtue of his election as President of the New York State Agricultural Society, Earl B. Clark succeeds Van C. Whittemore on the Council.

The Faculty of the College of Agriculture elected L. H. MacDaniels to succeed K. L. Turk and L. A. Maynard to succeed himself.

THE COLLEGE STAFF

During the year or to become effective on July 1, 1948, the following new appointments were made to the staff: Orval C. French, professor of agricultural engineering and head of the Department of Agricultural Engineering; Cameron G. Garman, acting professor of marketing (October 16, 1947 to February 15, 1948); Elton K. Hanks, professor in extension service; John D. Hartman, professor of vegetable crops; Harry B. Naylor, professor of dairy industry; Cyril W. Terry, professor of agricultural engineering; James L. Brann, jr., associate professor of entomology; Robert C. Clark, jr., associate professor of rural sociology; Aubrey A. Foster, associate professor of plant pathology; John G. Matthyse, associate professor of economic entomology; John T. Reid, associate professor of animal husbandry; Adrian M. Srb, associate professor of plant breeding; Howard E. Thomas, associate professor of rural sociology; Nyle C. Brady, assistant professor of agronomy; Herman J. Carew, assistant professor of vegetable crops; Francis T. Conka, acting assistant professor of vegetable crops (July 1, 1947 to March 31, 1948); Howard E. Conklin, assistant professor of land economics; Louise J. Daniel, assistant professor of biochemistry; Lloyd H. Davis, assistant professor of extension teaching; James B. Evans, assistant professor of bacteriology; Bert Lear, assistant professor of plant pathology; Duncan M. MacIntyre, assistant professor of rural sociology; Harold E. Moore, jr., assistant professor of botany and horticulture in the Bailey Hortorium; Raymond C. Scott, assistant professor of marketing; Harry W. Seeley, jr., assistant professor of bacteriology; Edward H. Smith, assistant professor of entomology; Eyvind B. Wahlgren, assistant professor of agricultural engineering; and Robert E. Wilkinson, assistant professor of plant pathology.

The following members of the staff retired during the year: Axel F. Gustafson, on June 30, 1948, and appointed professor of soil technology, emeritus, on July 1, 1948; Edward S. Guthrie, on June 30, 1948, and appointed professor of dairy industry, emeritus, on July 1, 1948; Charles A. Taylor, on June 30, 1948, and appointed professor in extension service, emeritus, on July 1, 1948; and Edmund L. Worthen, on December 31, 1947, and appointed professor of field crops, emeritus, on January 1, 1948.

Resignations took place during the year, as follows: Robert F. Chandler, jr., professor of soils; Leonard S. Cottrell, jr., professor of sociology and head of the Department of Rural Sociology; Irwin C. Gunsalus, professor of bacteriology; Glenn W. Salisbury, professor of animal husbandry; Wayne W. Umbreit, professor of bacteriology; Robert L. Cushing, associate professor of plant breeding; Willis A. Gortner, associate professor of biochemistry; Hans Platenius, associate professor of vegetable crops; Emmett I. Robertson, associate professor of poultry husbandry; Ellis F. Wallihan, associate professor of forest soils and agronomy; Albert S. Hunter, assistant professor of soil science; John E. King, assistant professor of secondary education; John M. Lawrence, assistant professor of biochemistry; and Franklin W. Southwick, assistant professor of pomology.

It is with deep regret that we record the death, on December 8, 1947, of Rollins Adams Emerson, professor of plant breeding, emeritus.

During the year fourteen promotions to the rank of professor were made, ten to the rank of associate professor, and three to the rank of assistant professor. Robert A. Polson, professor of rural sociology, has been appointed acting head of the Department of Rural Sociology for the year, July 1, 1948 to June 30, 1949.

THE STUDENT ENROLLMENT

The total number of students during 1947-1948 was slightly larger than in the previous year, and followed essentially the same pattern. The limitation of 1487

undergraduate students for the fall term permitted the enrollment of a very small number of freshmen, so that the sophomore class contains approximately 100 more students than the freshman class. With a necessary limit on the total number of students in the College it is difficult to correct such an irregularity in class size. The number of adult special students dropped to one-half that of 1946-1947. This was to be expected since that form of registration had been used for many returning veterans. With the enrollment of veterans declining, the number of students in this classification should soon return to 30 or 40 a year, as it was before the war.

The enrollment figures for 1947-1948, with those for 1946-1947 for comparison, were as follows:

	1946-47	1947-48
Four-year students:		
Freshmen	463	315
Sophomores	318	417
Juniors	259	331
Seniors	244	255
Total	1284	1318
Special students	138	69
Two-year students:		
Dairy farming	44	40
General farming	115	114
General livestock farming	18	12
Fruit growing	11	14
Poultry farming	19	19
Vegetable growing	8	6
Commercial floriculture	18	21
Nursery landscape service	1	4
Total	234	230
Graduate students	672	696
Summer-session students	624	717
Taking regular courses in the College but registered as extra-mural	68	117
Total	3020	3147
Less number counted twice	154	190
	2866	2957

WILLIAM I. MYERS,
Dean of the New York State College of Agriculture.

APPENDIX XIII

REPORT OF THE NEW YORK STATE AGRICULTURAL
EXPERIMENT STATION AT GENEVA

To the President of the University:

SIR: We have the honor to submit the report of the New York State Agricultural Experiment Station for the academic year ended June 30, 1948.

Work has progressed on the many problems in the field of production and processing of horticultural crops to the limits of our facilities. The amount of research demanded by growers and processors continues, however, to be much greater than we can accomplish with our present personnel and equipment. Vacancies in the professional staff caused by retirement or by resignation of younger men to accept more lucrative positions elsewhere could not always be filled promptly, due to the continuing acute shortage of qualified workers. It is self-evident that the productivity of a research institution now and in years to come depends primarily on the initiative of thoroughly trained and competent individuals. We have, therefore, chosen to delay filling vacancies until candidates with the standards required for a high type of research become available. In the meantime we have concentrated on providing the existing staff with a larger number of non technical and temporary service workers, and with an increasing amount of physical equipment.

Altho a few professional positions still remain unfilled at the present time, we have been fortunate during the past few years in attracting a group of younger men who have an excellent background of training and who show commendable enthusiasm for their work. The administration is constantly faced with the problems of holding these promising staff members who, as soon as they demonstrate their capacity for productive research, are frequently tempted with flattering offers from other institutions. The new salary scale promises at least a partial solution of this difficulty even though circumstances may be such that we cannot always meet the immediate offers.

The need for carrying out the postwar building plans at the earliest possible opportunity cannot be emphasized too strongly. Many types of research urgently demanded by the horticultural and the food processing industries cannot be done satisfactorily without adequate laboratory and pilot plant facilities. The young scientists, highly trained in advanced techniques, as well as the experienced staff members require such modern research equipment. The plans for the building are complete and appropriations have been made, but as yet we have no indication when the work will be started.

RESEARCH

A brief resumé of some of the results of research by the several divisions of the Station is given in the following paragraphs. A more detailed discussion is contained in the annual report of the Station to the Governor and the Legislature of the State.

Experiments begun in 1945, strongly indicate that the standard practices of pruning grapes fail to take fully into account the distinctive growth characteristics of varieties and the differences in vigor of individual vines. Yields have been significantly increased with the umbrella system of training that requires somewhat less severe pruning and is more flexible as to the amount of wood removed than the standard Kniffin or the Chautauqua system. It has been found that severe pruning reduces fruiting thru its harmful effect on pollen development, which in turn interferes with the "set" of the berries. Desirable wood growth has been increased significantly in the lighter pruned plots during the past 3 years, and the grape clusters per shoot have been larger and more numerous.

The extensive fruit breeding projects were favored in 1947 by a good year for seed production on crossed flowers. The large numbers of seeds obtained from known parents, ranging from 1,600 from cherry crosses to 20,000 from apples, were planted in the greenhouse before transferring to permanent fruiting locations. This new method saves about a year's time and a large amount of labor. Seedling

populations that have been growing in the field rows for 5 to 10 years have yielded 7 new apples, 2 pears, 9 peaches, and 13 cherries, all of which are regarded as sufficiently promising for vegetative propagation and further testing.

Three new grape varieties were named and introduced for trial by the New York State Fruit Testing Association. These were Schuyler, an early ripening, good quality, black juice grape; Interlaken Seedless, a white, early-ripening, seedless variety; and Steuben, a black, midseason, high quality variety for dessert and juice. One fall-bearing red raspberry that also produces an early summer crop was introduced and named "September". It is a cross between Marcy and Ranere. Blackberry crosses have yielded 47 selections that now are undergoing further trial.

With prevailing prices of vegetable canning crops, higher rates of commercial fertilizer than previously recommended are proving profitable. For example, a side dressing of $37\frac{1}{2}$ pounds of actual nitrogen, in addition to the 800 pounds of 5-10-5, fertilizer drilled into the soil before planting, resulted in a yield of sweet corn amounting to 5.1 tons per acre as compared to 4.2 tons on plots that received only the normal initial fertilizer. Pencil Pod wax beans grown on a plot previously in pasture for 20 years, yielded 4,210-4,490 and 4,860 pounds per acre when a side dressing of nitrogen of 25-50 and 100 pounds per acre respectively were added in July—about 3 weeks before harvest. Where no side dressing was applied, the yield was 3,590 pounds. With a basic application of 500 pounds per acre of a 5-10-10 fertilizer, additional potash applied to carrots at the rate of 400 pounds of K_2O per acre increased the yield from 13.0 for the check to 15.7 tons for the treated plots.

Under the provisions of the seed law, a total of 23,242 samples from farmers and 2,615 official samples were tested for germination and purity. The large volume indicates a continuing demand for this type of work that results in significant savings to the farmers of this State, due to more dependable seeds and better stands of crops.

Observations on Japanese beetle control made in 1947 on light, well drained soil indicated that the new insecticide DDT when used at the rates of 11, 22, and 33 pounds to the acre gave almost perfect control, even after 3 years, and compared favorably with the results obtained with lead arsenate used at the rates of 435 and 870 pounds to the acre. On heavy, poorly drained soils, the lighter applications of either insecticide allowed the soil to become partially reinfested with Japanese beetles within 3 years.

For controlling the summer forms of the European red mite on fruit trees, DN-111 has proved highly effective. This material may be injurious to the foliage if applied earlier than the second cover spray. Among the newer insecticides for foliage treatment that were used during the season of 1947, the following show promise: dichlorophenyl, ethane, dichlorophenoxy methane, hexaethyl, tetraphosphate, tetraethyl pyrophosphate, and parathion.

Several new chemicals were tested in different concentrations against the first brood of the Mexican bean beetle, viz: DDT; Methoxychlor, an analogue of DDT; Toxaphene, a chlorinated camphene; Parathion, a thiosulfate compound, and the gamma isomer of benzene hexachloride. Parathion and the 8 per cent concentration of Methoxychlor dust, gave as good control efficiency (97% or more) as Rotenone, the standard material, but the latter is the only dust recommended at present because it is safe for the plants and for the operator, and it does not leave a toxic residue.

The 1947 tests of new cabbage strains clearly indicate that most of the Geneva breeding stocks that are resistant to yellows and other cabbage diseases yield as well as, or even better than existing commercial varieties. Some of the latter proved highly susceptible to disease. Several new late storage varieties of cabbage developed at Geneva are quite uniform and may be ready for release to growers after 1 or 2 more years trial. A few undesirable characters are still present in most resistant kraut strains. The control of tomato diseases proved to be more effective when fungicides were applied as a spray by conventional machinery rather than by dusting with airplane or helicopter. A recently developed leaf print method for determining copper deposits on the foliage indicates that the control of diseases and the yield of tomatoes are closely correlated with the distribution of the fungicide thruout the plant. There is some evidence to indicate that the varieties Longred and Wisconsin 55 are resistant to late blight. On the other hand, Gem and Wisconsin

sin 55 showed more anthracnose infection in the non-sprayed plots than other varieties.

The control of black rot and powdery mildew on grapes, obtained with dusts, wet dusts, and concentrate sprays, suggest that these methods of applying fungicides may soon be developed to the point where they will be more satisfactory than the dilute sprays recommended at present. The concentrated materials can be applied more rapidly, with less residue and at a lower cost, and they appear to be less injurious to the leaves of the vine.

Experiments in the Hudson Valley afforded definite data substantiating previous observations that apple tree foliage becomes more susceptible to scab as the amount of nitrogen applied to the soil in spring increases; but increasing amounts of soluble nitrogen material applied as a foliage spray during the growing season does not favor the development of severe scab in the same ratio. This new method of supplying at least part of the nitrogen requirements of apple trees gives promise also of a better means of controlling color, premature fruit drop, and regularity of bearing, especially for such varieties as McIntosh.

Inadequate blanching of peas at low temperatures causes large losses of ascorbic acid during and after processing by disrupting the tissues and thus enhancing the action of oxidative enzymes. Experiments have shown that at temperatures of 200° to 210° F. the enzymes are quickly inactivated before any appreciable destruction is accomplished. High temperature, short time blanches therefore seem to be more desirable.

Color measurements by a photoelectric colorimeter on strawberry preserves indicate that there is considerable acceleration of the loss of red anthocyanin when the storage temperatures exceed 65F. The pigment of strawberries has been isolated and identified as pelargonidin 3-glucoside. It seems probable that the major part of the loss of red color in strawberry preserves occurs through intermolecular reactions of these anthocyanins with other constituents of the fruit, rather than intra-molecular reactions.

Investigations on the use of dielectric heating for the blanching of vegetables prior to freezing have been continued. It has been shown that the occurrence of off-flavors can be prevented by rapid cooling after heating by this method of blanching. The cooked frozen samples treated in this way possess a better flavor than can be obtained with conventional methods.

About 11% of the 2,810 official samples of commercial feeding stuffs received for analysis were found to be violations of State laws and were referred to the State Department of Agriculture and Markets for action. Among the 300 official samples of insecticides and fungicides analyzed, approximately 8% were found to be seriously adulterated or below guarantee. Additional determinations will be required in the future to comply with the provisions of the New York State Economic Poisons Law, which became effective Nov. 15, 1947. Out of 411 official samples of fertilizers, approximately 27% were found to be violations.

APPROPRIATIONS

State appropriations for the work of the Experiment Station for the fiscal year ended March 31, 1948, amounted to \$535,150. For the year beginning April 1, 1948, \$666,018 was made available for personal service and maintenance and operation. In addition, there was an appropriation from the Postwar Fund of \$27,665 for equipment. The allotment of Federal Funds for 1948-49 included \$1,500 Adams, 1,500 Hatch, \$6,000 Purnell; \$11,022.46 Bankhead-Jones, and \$6,544.97 Research and Marketing. Additional grants-in-aid, investigatorships and fellowships supported by industrial organizations numbered 23, and amounted to \$45,650.

ORGANIZATION AND STAFF

Appointments during the year included Harry C. Young, Jr., Assistant Professor of Plant Pathology, August 1, 1947. Several other appointments have been approved and will become effective after July 1, 1948.

Resignations included Roger W. Bledsoe, Assistant Professor of Pomology, November 15, 1947; Ellsworth H. Wheeler, Assistant Professor of Entomology,

PRESIDENT'S REPORT

for the year before, it was impossible to expand undergraduate numbers. This was in part because of the Cornell University allotment made necessary by the housing situation, but also because a further expansion of undergraduate enrollment is impossible with our present facilities if we are to develop other still more pressing parts of the program.

The total student enrollment for the year 1947-1948 was as follows:

	<i>Fall Term</i>	<i>Spring Term</i>	<i>Total (Differ- ent Students) for year</i>
Seniors	166	138	170
Juniors	151	147	153
Sophomores	162	153	163
Freshmen	136	134	136
Special Students	8	6	10
Graduate Students	60	64	69
	<hr/>	<hr/>	<hr/>
	683	642	701
Total Summer Session . . . . .	...	...	236
			<hr/>
			937
Less duplications . . . . .	...	...	-25
			<hr/>
			912
Total home economics students . . . . .	...	...	415
Hotel Administration students	356	356 (59 new)	415
			<hr/>
Total All Students			1327

Four senior students were enrolled for a semester at the Merrill-Palmer School for special study and their credits were transferred to their college records at Cornell University. Ten students were enrolled at the Cornell University-New York Hospital School of Nursing. Sixteen transfer students were admitted with advanced standing from 14 different colleges and universities.

Student Records

The acquisition of IBM machines by the University Registrar's Office made it possible to give every home economics student her complete mid-term and term records. Previously these were distributed only on request. Also the College was furnished a complete list of home economics students registered in courses in other colleges and of students in other colleges who were taking home economics courses. This helped greatly in computing accessory instruction costs.

Need for development of graduate program

Requests for workers to fill full-time jobs totaled 635 for the year. The distribution of job openings shows that nearly one half were for personnel who hold the master's degree or academic training beyond this level. Thus many of the positions were not open to current graduates with the B. S. degree, but only to graduates with advanced degrees either at Cornell University or elsewhere. More needs to be done to locate jobs for new graduates, and to encourage alumnae of a few years' standing to take advanced work.

The Home Economics Council has agreed that expansion of the graduate program is essential if we are to carry our responsibility in the provision to the field of home economics personnel with advanced training. We were, therefore, permitted an increase of ten students in our Cornell University graduate allotment as part of a plan for the gradual development of our graduate program. There were 69 graduate students in the fall and spring semesters of 1947-1948, and 72 in the Summer Session. Thirteen of these were duplicates; thus there were 129 graduate students enrolled during the year.

January 15, 1948; George D. Oberle, Associate Professor of Pomology, January 31, 1948; James L. Brann, Assistant Professor of Entomology, May 31, 1948.

The following members of the staff retired during the year: Robert S. Breed, on October 31, 1947, and appointed Professor of Bacteriology Emeritus on November 1, 1947; Harold J. Conn, on April 30, 1948, and appointed Professor of Bacteriology Emeritus on May 1, 1948; Lewis M. van Alstyne, Research Associate in Pomology, on June 30, 1948.

It is with deep regret that we record the death of S. Willard Harman, Associate Professor of Entomology, on March 17, 1948.

During the year, the following were promoted in rank: Nelson J. Shaulis, from Assistant Professor to Associate Professor of Pomology; Wilbur T. Schroeder, from Assistant Professor to Associate Professor of Plant Pathology; John Einset, from Assistant Professor to Associate Professor of Pomology; Ralph W. Dean, from Assistant Professor to Associate Professor of Entomology.

Close cooperation among the members of the staff at Geneva and at Ithaca continues to be an effective means of coordinating our research program. Many formal conferences and frequent personal contacts have practically eliminated any unnecessary duplication of effort and have enabled us to use our combined facilities in the most effective manner. The Geneva staff, while primarily concerned with research has also been called upon to meet many extension engagements during the year, and in some cases they have taken a part in residential teaching activities at both the undergraduate and graduate levels.

W. I. MYERS,

Dean of the New York State College of Agriculture

ARTHUR J. HEINICKE,

Director of the New York State Experiment Station.

APPENDIX XIV

REPORT OF THE DEAN OF THE NEW YORK STATE COLLEGE OF HOME ECONOMICS

To the President of the University:

SIR: I have the honor to submit the report of the New York State College of Home Economics for the year 1947-1948.

The administrative reorganization which went into effect on October 1, 1947, with a Coordinator of Extension, a Coordinator of Resident Instruction, and a Coordinator of Research, has worked smoothly during the year. Under the chairmanship of the Coordinator of Extension, the Extension Education Policy Committee has moved forward in the coordination of the work of the 4-H Club and Home Demonstration Agents with each other, with the specialists at the 4-H, the Older Youth, and the Home Demonstration levels of the work and with specialists in different departments or colleges. A genuine beginning has been made in the use of specialists for joint training programs, and in the joint planning of field programs. The Resident Educational Policies Committee, under the chairmanship of the Dean who serves as Coordinator of Resident Instruction, has continued to analyze the educational objectives of the College and to make recommendations for curriculum changes which will better fulfill these objectives. The Research Committee, under the chairmanship of the Coordinator of Research has progressed in the task of coordinating the various departmental research programs and in helping departments to plan new research. The three Coordinators in weekly conference have made possible a clearing of the interests and viewpoints of Extension, Research, and Resident Instruction, and a closer teaming of the different programs.

Enrollment

The undergraduate enrollment of the College has remained the same as for previous years. Even though the pressure for admissions was more severe than it was

RESIDENT TEACHING PROGRAM

Attention in teaching has continued to focus upon preparation for homemaking as well as upon professional training. It is assumed that home economics graduates should be well-equipped for homemaking themselves and for teaching the context of home economics to others, so that it will improve the level of homemaking for established homemakers, as well as for future homemakers. As the basic arts and sciences such as fine arts, architecture, chemistry, physics, physiology, biology, psychology, sociology, and economics contribute increasingly accurate and satisfying answers for homemaking, it is important that both undergraduate and graduate students be well grounded in these arts and sciences. It is hoped that students may be prepared also as generally well educated and intelligent participants in community life. As in the past, our students continue to take approximately half of their work in other colleges in Cornell University. We wish here to express our appreciation of the fine effort made by other colleges on the campus to accommodate the needs of our students in the face of the seriously crowded schedules of their own students. We, in turn, have attempted to find places in our classes for the many non-home economics students who wish some training in homemaking and family life.

Department of Child Development and Family Relationships

In this department three more sections were added to the popular course, *Marriage*. A third group of children was added to the nursery school laboratory here, and a member of the nursery school staff directed a nursery group at the Ithaca Child Care Center. This was used for observation and study by our students.

In spite of these additions, many students from colleges other than Home Economics had to be denied admission to courses in this department because of lack of accommodations for larger numbers. It is anticipated that this demand will increase in the years immediately ahead. We hope to be able to make some provision in the near future to meet this need.

One new course, *History and philosophy of early childhood education*, was offered.

Department of Economics of the Household and Household Management

Emphasis in this department was upon management and economics problems that families face now that new household equipment and materials are available. A new development in one course was to offer two informal discussion periods in addition to classes. These proved helpful toward increasing the students' appreciation of their economic environment and possibilities for improving it.

The number of graduate students and graduate assistantships nearly reached the level of pre-war years. Registered for graduate work were 3 candidates for the degree of Ph.D., one non-candidate, and 12 for the degree of M.S., 10 of whom were registered under Plan B.

Department of Extension Teaching and Information

For the first time, a three-hours-credit course, *Special problems*, was given in this department.

Department of Food and Nutrition

A new course for upper-class and graduate students, *Community and family nutrition*, was offered to help students understand the organization of agencies and duties of persons engaged in nutrition work in communities and to gain insight into community nutrition problems.

The need for an elementary course in nutrition for missionaries who were special students in the College of Agriculture, was met by registering them in the course, *Nutrition and health*. They were then scheduled for an additional one-hour meeting weekly to consider problems of special interest to the group.

A new course, *Nutrition of growth and development*, was offered at the graduate level. Of the eighteen graduate students in the department, four were candidates for the degree of Ph.D., and 14 for the degree of M.S. Twelve graduate students held assistantships.

Orientation

After the interruption of the regular Freshman orientation during the war and last year, the return to normal did much to facilitate the ease and adequacy of adjustment for our new students. Forty-nine of our 134 Home Economics freshmen attended Cornell United Religious Work Freshman Camp. Our regular parent tea for entering students and their parents was followed by separate discussion sessions for parents and for students. A total of 71 families, 54%, were represented. Of the parents attending 42, or 60%, were fathers. The greatly strengthened program of orientation for all Cornell University freshman women in the fall of 1947 with six weeks of special sessions proved an invaluable addition to the Home Economics orientation program.

Student Housing

Improved housing and social program for all women students was reflected in the personal happiness and academic adequacy of our students. The availability of housing for some of the graduate women helped solve an acute housing problem for our graduate students, and has been reported by those so accommodated as having improved study as well as living conditions, and as having greatly reduced physical fatigue.

Farm and Home Week

Farm and Home Week was reestablished this year and was met with enthusiasm. The people of the state feel a close interest in the Colleges of Agriculture and Home Economics and greatly appreciate the opportunity to visit the campus and to see for themselves some of the work that is being done to answer their questions and to meet their needs. Not the least of the benefits of Farm and Home Week is to the students on campus. In home economics all formal classes were dismissed in order to give space to the Farm and Home week programs, and to allow the students to participate in the demonstrations, to usher for lectures, to register and escort visitors, and in other ways to have the experience of being useful to the people of the State.

New York State Food Commission

Considerable time was given by the supervisory staff and agents of the extension service and by The Department of Food and Nutrition to the New York State Food Commission. This was created by Governor Dewey in October, 1947, to meet the emergency need for grain for Europe, while at the same time maintaining the health and vigor of the families of New York State through improved family eating habits. The long-time plans of the College Nutrition Committee were made available to the Commission and technical material on food and nutrition was supplied for the use of the Commission staff.

Visitors

Visitors from foreign countries and from other colleges of home economics in this country have taken much of our time, as they did in 1946-1947. European and Asiatic visitors seem to see the education of homemakers, at least in part, as an education of a consumer public. It was felt that more intelligent use of available food and other materials should have its ultimate effect, not only upon the health of citizens, but also upon the economy of the country. Programs for homemaking education are being set up or expanded in several countries. In this country certain schools and colleges of home economics are developing new curricula or giving new emphasis to old curricula. Whatever time such visitors take is more than repaid to us in renewed insight into our own program and in the wider viewpoint brought to us.

Use of Building

Even more than in previous years our building has been used intensively day and night. Not only does it house approximately half of the class, laboratory, and library activities of over a thousand students; it also serves innumerable student activity projects, extension training schools, and group conferences. The spirit of our building staff in keeping up the appearance and usefulness of the building is deeply appreciated.

tional section each semester. It is not always possible to offer this additional section but the department plans to serve these students when faculty loads permit.

The second core course, *Home furnishings*, is expected to reach its peak load next year; this will tax the present staff. By alternating elective courses rather than offering certain ones every semester, this load can be carried.

Offered for the first time was a summer session course, *Techniques and lay-outs for posters, exhibits, demonstration displays, and bulletin preparation*.

The Martha Van Rensselaer Art Gallery presented twelve exhibitions, including the work of students and faculty members, and circulating exhibits from important museums and galleries.

House furnishings, graduate course for extension workers, offered for the first time in the Spring semester, 1948, was so highly successful that it will be offered each spring if it can be staffed.

In the Rural Housing program, seven housing training meetings of two days each for agents were held in each of five districts. Requests from farm families for help with their housing problems indicate a need for more publications on planning, remodeling, repairing, construction, and utilities. Research data which show accurately the needs of farm families are greatly needed.

Department of Institution Management

Since offerings in this department are largely at the upper division level, and since vocational training possibilities throughout the College have increased, the enrollment in Institution Management has declined. Of the total registration, 116 or 45 per cent were Hotel Administration students. Eleven graduate students were enrolled during the Summer Session, and six were in residence during the academic year.

The renewal of Farm and Home Week brought a total of 12,125 patrons to the cafeteria and to the Green Room. The largest number served at one meal was 3,449.

Such large scale operations make a realistic laboratory for students but demand so much staff time that research in this department has been impeded.

Department of Textiles and Clothing

Two new courses were introduced in this department: A three-hour lecture course, *The history of costume*, and a course for students from other colleges, *Clothing selection and construction*. The course, *Hotel textiles*, for students in the Department of Hotel Administration, was given for the first time since 1942.

Six graduate students, two of whom held assistantships, worked toward the degree of M.S.

EXTENSION SERVICE PROGRAM

Home Demonstration Work

Cooperative extension work in home economics with adults was carried on in 52 counties and 3 cities of the state with a field staff of 106 agents and assistants. A total of 81,393 homemakers took part in the program, 24,750 of whom served as volunteer local leaders in 2,179 units. This enrollment exceeds that of last year by more than 10,000.

This year was an interesting one of adjustments and new developments. A certain amount of restlessness and uncertainty still influenced the people with whom we work. These conditions affected the extension program in home economics by causing great diversity in the programs planned in the counties to meet the needs and interests of those participating.

Homemakers are conscious of the need for help with meal planning because of rapidly rising costs of food. They reported preserving more than 10,000 tons of fruit, vegetables, and meat. This helped families have better meals and it also released commercially-grown food for the use of families in other countries. The need for saving money was expressed by the large numbers of women who wanted to learn to sew. From reports on hand, it may be assumed that families cooperating made a saving of at least three quarters of a million dollars.

The anticipated activity in remodeling farm houses lagged because of high costs and the scarcity of materials and labor. However, about 2,700 families reported

Department of Home Economics Education

The undergraduate program of this department was focused upon the development of home economics workers for the Extension Service and home economics teachers for the public schools. In an eight-hour course for each group, the entire time was devoted to supervised practice. Half of that time was spent in the homemaking apartments, the other half in supervised teaching in a community where they took an active part in community life.

The first students to complete the requirements in the undergraduate extension curriculum were graduated in June, 1948.

The undergraduate courses, *Extension home economics education* and *The art of teaching*, enhance and strengthen each other. The development of both programs in one department offered significant and valuable opportunities for the close correlation of school and extension programs at both the youth and the adult level.

Two graduate students were registered as candidates for the degree of Ph.D and 29 were candidates for an M.S. in Education with a focus on home economics education (these students do not count in the home economics allotment), or candidates for an M.S., Plan B degree, with a special interest in home economics education.

Four graduate courses in Home Economics Education were offered during the academic year, and six were offered during the summer session. Adult education and community participation were emphasized in the entire program. The department assumed a share in the State Education Department's program of in-service teacher education. Seventy-five teachers registered for "A Refresher Conference for Teachers in New York State," in which staff members of the State Education Department, of the School of Education, and of the College of Home Economics participated.

A workshop of City Supervisors sponsored jointly by the United States Office of Education and Cornell University was held for two weeks during the summer session.

Homemaking Apartments

Twenty-four seniors preparing for teaching or Extension work took the six-hours-credit course, *Homemaking apartments, residence course*. Five other students took the three-hours-credit course, *Homemaking apartments, residence course*, which was given as an experiment. Three other classes totaling 36 students, enrolled in the course, *Homemaking apartments*, which serves as a pre-requisite for the other two.

In all apartment courses, a conscious effort was made to simplify the work and to eliminate tasks which seemed to consume more time than the end result warranted spending. The emphasis was on happy family living.

The adviser was associated with the Department of Home Economics Education and met regularly with that staff. Two graduate students under Plan B elected problems related to the apartments.

Department of Hotel Administration

The enrollment in this department reached a new high level of 360 students representing 36 states and 5 foreign nations. This department works in close co-operation with the Departments of Institution Management, Food and Nutrition, Housing and Design, and Textiles and Clothing.

Department of Housing and Design

For the past two years, this department has devoted particular thought to the development of a rural housing program in Extension, begun in 1946, and to a housing research program begun this year. The department also started study on a plan for a graduate curriculum, focused toward the needs of the professional worker in housing and design.

The undergraduate curriculum was focused toward study and training to meet the needs in design and housing of the potential homemaker. The peak load of one core course, *Color and design*, was passed this year and has now probably reached its norm, which demands six sections each semester. Increased registration of students from other colleges on the campus requires the equivalent of one addi-

Radio

One hundred eighty-six radio programs were prepared, including two by television; weekly radio briefs sent to 60 stations; daily and weekly broadcasts over WHCU; semi-monthly programs over WGY; many transcriptions and special programs.

Requests for Information

Requests for information handled through the Department of Extension Teaching and Information totalled 1,041 letters and 50 telephone calls. The approximate number of requests for information handled through other departments was 3,278. Some of these overlapped the previous figure since most requests were referred to subject-matter departments.

Bulletins and Pictures

The estimated number of bulletins distributed totalled 1,500,000. More than 200 pictures, mostly for press or bulletins, one motion picture, and two sets of slides were made by the Visual Aids section of the Department of Extension Teaching and Information.

Supplemental Teaching Materials

A staff of seven stenographers was maintained in the Extension Secretary's office throughout the greater part of the year. From June 30, 1947 to July 1, 1948, they cut a total of 4,283 stencils, and ran off 577,491 sheets of stencilled material for the resident staff and 1,241,156 for the extension staff. Several departments requested that certain of their teaching materials, particularly 4-H club members' guides, be multilithed instead of mimeographed. A total of 292 multex plates were made; 3,355 sheets were run for the resident staff and 696,700 for the extension staff. These mimeographed and multilithed materials provide an important supplement to other devices for teaching a vast audience through lay leaders.

Problems in Extension

The rapid development of our extension work has presented some difficult problems.

1. Numbers of Home Bureau and 4-H club members have continued to expand rapidly. The number of agents in counties and cities has continued to grow. However, the supervisory staff and the number of subject-matter specialists has remained almost stationary. This has necessitated a stream-lining of the use of supervisory and specialist staff and a reorganization of procedure. The Extension Education Policy Committee has made an excellent contribution toward this end.

2. Sharply increased costs of living have caused homemakers to turn increasingly to the College for help in selecting and preparing foods, in selecting and maintaining household equipment, in meeting clothing costs, and in maintaining the attractiveness of their homes within the available budgets. Both extension and resident staff have felt a heavy additional burden in these increased demands for help which come through the mail and over the telephone. A great deal of time is needed if such calls are to be answered helpfully. Our radio and news services have given wide dissemination to more general answers to many of these questions, as well as to new ideas and the results of research. The byproduct of this mass coverage is, however, an increased knowledge about the College and a consequent increase in demands for help. Bulletins can be used in answering questions, but even with liberal increases in printing money, the demand for bulletins has many times out-run our supply.

RESEARCH PROGRAM

Each of the seven departments in the College of Home Economics as well as the Rural Housing Research program has made notable progress this year in research designed to improve family and community living.

In the Department of Child Development and Family Relationships, stress was laid on fuller understanding of the pre-school child and the relationship between

some building or remodeling as a result of extension teaching. Another 8,000 made changes to improve storage space, and 17,000 rearranged various work rooms to make household tasks easier.

Extension groups worked toward world friendship, community development and better human relationships under the guidance of several department specialists and the extension agents. Programs were planned on these subjects, but modified in each county to meet local interests.

In addition to the regular extension program planned for this year, all counties cooperated in the state and federal food conservation programs. The State Food Commission and the State Nutrition Committee, the coordinating agencies, called upon specialists, agents and local leaders to help with this important job.

Programs in citizenship, health and international friendship were carried on cooperatively with the New York State Federation of Home Bureaus. Other programs were carried on cooperatively with the State Departments of Commerce, Education and Health; State Food Commission, State Nutrition Committee; State Home Economics Association; State Council of Rural Women and a wide number of other organizations and agencies.

Each department of the College contributed toward effectiveness of the home demonstration work. Specialists from the Department of Child Development and Family Relationships worked in 49 counties and gave assistance to 3,299 persons who attended 151 leader training meetings. In the Department of Economics of the Household and Household Management, three specialists conducted 91 training schools in home management in 55 counties and one city, with a total of 1,562 local leaders in attendance. The Department of Food and Nutrition sent out four specialists to guide the senior food and nutrition program in 50 counties and three cities. They conducted 212 local leaders training meetings with an attendance of 4,650. Members of the Department of Home Economics Education aided with in-service training of teachers and participated in many extension leader conferences and in teachers' conferences at local, county, state, and national levels. The Department of Housing and Design maintained three specialists who guided more than 25 home furnishings projects to help families care for and repair what they already have and to make new furnishings. One specialist in the Department of Institution Management served throughout the year in extension work. Forty community kitchen conferences were held in 21 counties. Three senior specialists served 53 counties and 3 cities in the Department of Textiles and Clothing. A total of 4,210 leaders in 1,390 communities were trained and 53,128 families were helped with problems of clothing construction.

4-H Clubs

Enrolled 4-H club members during 1947-1948 totalled 46,787 young people between the ages of 10 and 21 years, who carried 87,472 individual projects. The program was conducted in 54 counties by 91 full-time club agents. One agent trained in agriculture and one trained in home economics was employed in each of 34 counties. In Nassau County a third agent was added. Warren County organized a 4-H club department.

National 4-H Club Week, March 1 to 5, was observed in New York with special programs, demonstrations and window displays. During this week about 125 club members and agents made the trip to Albany on annual Capitol Day to visit the legislature and meet Governor Dewey.

Unorganized Groups Reached Through Extension Program

In addition to the work of the Extension Service through organized groups, a vast number of families were helped through the channels of mass media: Bulletins, newspapers, magazines, radio, and visual aids.

The year's output through these media was as follows:

Press

Regular weekly features to county weeklies and home demonstration agents, 155; special features with photographs to State newspapers, wire services and national magazines, 69; items to daily newspapers, 190; special stories to magazines, 24. Total 438.

A professor of housing research was appointed to the Department of Housing and Design in December 1947 to supervise and conduct research work carried under new funds made available under the Federal Research and Marketing Act. As a participant in a regional research project, he is at present devoting time to a "Study of farm housing requirements in the northeast region." The job of interviewing 277 New York State families has been completed. The responsibility for tabulating, coding, and analyzing 667 schedules taken in the region will be carried this year at Cornell.

A review of work simplification in institutional management and its application to three areas of work in a college cafeteria was completed by the Department of Institution Management. The study resulted in new equipment and revised arrangement of present equipment in the Home Economics cafeteria which simplified and speeded up the work and improved service to customers. Investigations on the retention of palatability and of nutrients during large-scale cooking of vegetables was continued.

In conjunction with the Department of Child Development and Family Relationships, the Department of Textiles and Clothing continued a study of clothing of pre-school children, as it relates to their behavior and development.

Rural Housing Research, which is being done under an appropriation by the New York State legislature completed detailed plans for remodelling a typical New York State farmhouse from which a bulletin and blueprints will be made available; has made plans and models for a new low-cost farmhouse; completed models of movable wall sections to aid farm families in visualizing possible space arrangements before remodelling; devised a system of filing photographs and illustrated articles applicable to farmhouse problems.

The unit on extension studies carried forward three Home Bureau studies designed and started during 1946-47. They are: Composition of the 1947 Home Bureau membership; Why some farm women belong or do not belong to the Home Bureau (Pilot survey in Chemung County); Composition of the 1948 Home Bureau membership.

About 90 per cent of New York State's nearly 73,000 Home Bureau members in 1947 were classified as to residence. The summary showed that the membership was about 27 per cent farm; 38 per cent rural non-farm; 35 per cent urban. This represented about 10 per cent of the farm women in the counties studied; 6 per cent of the rural non-farm women; 2 per cent of the urban women.

The survey on why farm women do or do not belong to the Home Bureau revealed that about two-thirds of the non-member farm women had not joined because of conditions which the Home Bureau could change, and about one-third had not joined because of conditions which the Home Bureau could do little or nothing to change.

The 1948 membership study, still incomplete, concerns the proportion of Home Bureau members with children at home; age of those children; age in general of homemakers enrolled; affiliation of any member of the family with Farm Bureau and/or 4-H Club.

APPROPRIATIONS

On April 1, 1948, the State adopted for the State colleges a new classification act which incorporated into base salary the previous emergency compensation payments. Also effective April 1, 1948, the State adopted an additional cost of living compensation which has been made applicable to the State College staffs. These increases in compensation have helped greatly in the obtaining of new faculty and in the holding of present faculty against sharp national competition for faculty in home economics. In order to hold a balance among faculty members, these same adjustments have been made on our Federal and College salaries. Since Federal funds have not been increased in amount in 1947-1948, this has posed a difficult problem.

In addition to the above increases in salaries, the State granted increases for other uses of \$115,684, \$35,316 of which was for new positions, \$20,000 for accessory instruction, and \$5,960 for continued research in kitchen design and rural housing and for initiating a new project in child development and family relationships. This now makes a total of \$25,000 provided by the State for research. The sum of

parents and children. Eight studies were completed. An attempt to discover the process by which authority patterns between husband and wife and parents and children arise, showed that the same "balance of power" tends to be handed down to second generation families.

Records were made of the adjustment of a blind child to the nursery school. An exploratory attempt was made to determine whether significant attitudes toward child-rearing could be elicited through a free group discussion technique. A questionnaire-interview study was done concerning the dating behavior of high school seniors. Indications were found that boys and girls who infrequently date need help with their adjustments to each other.

A source book of Chinese food habits was compiled to indicate the influence of food habits on the nutrition of a people and their everyday living.

A study of the choice and use of play materials of pre-school children was conducted through limited observation in the College Nursery School. Current trends in pre-school and parent education in the United States were applied to conditions in the United Provinces in India. Acculturation was studied as revealed in the behavioral patterns of Japanese-Canadian families.

The Department of Economics of the Household and Household Management completed a study on household tasks in relation to the worker and the equipment. Results indicated that the standard 31-inch height of ironing boards is too low for the comfort of the worker and that kitchen sinks, in general, are placed too low to be used without excessive fatigue to the homemaker. Techniques perfected in this investigation are being applied in a study of certain component activities of household tasks such as bending, reaching, lifting, and pulling.

Alternative kitchen layouts have been developed and are being analyzed in the study of the development of a functional basis for kitchen designing. These incorporate different arrangements of the major pieces of equipment and the structural openings of the room.

The study of variations in dimensions and weights of consumer packages was continued this year and a study of financial problems connected with the handling of decedent estates of rural families was initiated.

Eight studies, completed in the Department of Food and Nutrition, throw further light on cookery to retain the maximum of nutrients, and on the effect of the absorption and retention of nutrients by the body. A study of the retention of thiamine and riboflavin during large-scale cooking and holding of cabbage and broccoli showed that both vegetables may be held up to 60 minutes without appreciable loss of either vitamin. Thiamine retention in yeast bread and rolls was found to decrease as the products were baked to a darker crust color. The difference in palatability and texture of chocolate cakes made with different types of baking powder and with sweet and sour milk were studied.

A study of the absorption of iron from beef by women indicated that the addition of large amounts of beef to the diet appreciably improves the absorption of iron. The relation of menstrual iron losses to the iron retention required by women was studied with five healthy 18-year-old women as subjects. Research on the iron losses in perspiration suggested that the sweat glands do not secrete iron. A method of analysis for iron content of milk was checked in several ways and found to be valid.

Food purchase records were kept for one week in December 1947 by 38 student veterans' families. The records as a whole show good food purchasing habits with regard to available nutrients.

A member of the Department of Home Economics Education was state chairman for a national research project to determine the factors affecting the supply of home economics teachers as a basis for improving the supply. Studies were completed on: A functional program of education for family life in the Scotia (N. Y.) schools; a plan for evaluating the adequacy of off-campus student teaching; an educational method for improving parent-child relations; a method for developing a functional course of study in family relationships; a study of parent opinion regarding the value of homemaking program; a suggested procedure for program planning for a Junior Farmer Association; an experimental study of radio as a method for parent education; an analysis of the unit in clothing and grooming in a Binghamton (N. Y.) junior high school.

of the curriculum is, however, planned during next year so that any necessary modifications can be made for the year 1949-1950. At present approximately three-fourths of the 120 hours necessary for graduation are required courses. Approximately half of the course work of students in the School is taken in the School; the remainder is made up of courses in other Schools and Colleges.

The courses required for students of the School, but supplied by other Schools and Colleges within the University have been as follows:

- English—Arts and Sciences
- Sociology—Arts and Sciences
- Psychology—Arts and Sciences
- Mathematics—Arts and Sciences
- American History—Arts and Sciences
- Modern Economic Society—Arts and Sciences
- Government—Arts and Sciences
- Ethics—Arts and Sciences
- Organization and Management of Production—Engineering
- Accounting—Hotel Administration
- Speech—Arts and Sciences
- Corporation Finance—Arts and Sciences
- Principles of Public Administration—Business and Public Administration

The required courses taught by members of the faculty of the School of Industrial and Labor Relations have been as follows:

- Background of Industrial and Labor Relations I
- Background of Industrial and Labor Relations IA
- Industrial Occupations & Processes 2
- American Ideals 1
- Economics of Wages & Employment 21
- Labor History 42
- Business & Industrial History 24
- Personnel Management 45
- Statistics 40
- Labor Union Organization & Management 43
- Human Relations in Industry 44
- Labor Relations Law & Legislation 59
- Labor Relations—Contract Making and Administration 60
- Protective Labor Legislation 62
- Social Security 63

The required courses listed have been supplemented by a variety of elective courses both inside and outside the School. During the current school year there have been 469 course registrations outside the School taken by students of the School on an elective basis. Approximately 75 per cent of such course registrations have been in Economics, Government, Philosophy, Sociology and Anthropology, Psychology, English and Literature, Hotel Administration, Law, and Engineering. The remaining outside electives have been spread over a wide variety of fields including registrations in various departments in the College of Agriculture and a small number in departments such as History, Modern Language, Music, Speech, Geology, Mathematics, etc.

The following courses within the School which have been available as electives for undergraduate students from the School had an aggregate registration of 244 during the current year.

- ILR 23 Elements of Law
- ILR 41 Statistics (second semester)
- ILR 48 Audio-Visual Aids in Industrial and Labor Relations
- ILR 64 Advanced Personnel Management
- ILR 65 Intermediate Statistics
- ILR 68 Public Relations
- ILR 69 Patterns of Thought in Industrial and Labor Relations
- ILR 70 Administrative Practices and Procedures
- ILR 72 Civil Liberties in Industrial and Labor Relations

\$53,925 was provided by the Federal government for research in home economics and smaller sums by private funds. The total increase in research monies in 1947-1948 was \$24,300.

ELIZABETH LEE VINCENT,
Dean, New York State College of Home Economics.

APPENDIX XV

REPORT OF THE DEAN OF THE NEW YORK STATE SCHOOL OF INDUSTRIAL AND LABOR RELATIONS

To the President of the University:

SIR: I have the honor to present the report of the New York State School of Industrial and Labor Relations for the academic year 1947-1948.

In its third year of operation, the School has enlarged its threefold program of resident instruction, research and information and extension teaching to meet the increasing needs of its student body, of labor and management groups and of the general public. That the School has made some progress in establishing the educational foundations for better information and understanding in the field of labor-management relations is testified by the wide-spread interest and participation in the program of the School.

The following have been added to the professorial staff of the School effective during the past year: Leonard P. Adams, Director of Research and Professor; Ralph N. Campbell, Director of Extension and Professor; Alexander H. Leighton, Professor; N. Arnold Tolles, Professor; Earl Brooks, Associate Professor; Jesse T. Carpenter, Acting Associate Professor; C. Arnold Hanson, Assistant Director of Student Personnel; Robert H. Ferguson, Assistant Professor; Philomena Marquardt, Assistant Professor; Mary O. Marquardt, Assistant Professor. It was with sincere regret that the resignation of Professor Donald J. Shank who had been Director of Student Personnel for the past three years was accepted on the occasion of his acceptance of the position of Vice-President of the Institute of International Education.

RESIDENT TEACHING PROGRAM

During the first term of the current School year, 283 undergraduate students were enrolled in the four-year program. Of this group, 24 were graduated in February and 58 in June, 1948. In February there were six withdrawals, and 31 students with advanced standing were admitted to the School bringing the enrollment for the second term to 284.

The undergraduate student body of the School is made up of students coming from a wide variety of family backgrounds. The relatively high average age of 25 years results from the high proportion of veterans. Although some students have had job experience before coming to this School, most of them have not established themselves as representatives of labor, management, or the public.

Of the 284 undergraduate students during the spring term of the current school year, 1947-1948, 35 or 12 per cent were women. Of the student body, 34 or 12 per cent came from outside New York State. Of the 250 students from New York State, 142 were from up-state and 108 were from the New York-Metropolitan area.

For the School year, 1948-1949, it is planned to have an undergraduate student body of approximately 300. There will also be 30 graduate students. It is felt that 300 undergraduate students is the maximum that the School will be in position to accommodate pending the availability of more adequate physical facilities. It is hoped that the School can accommodate a gradual increase in the enrollment of graduate students.

With a few modifications, the curriculum for the four-year undergraduate program will remain unchanged for the ensuing year. A comprehensive reexamination

work, a survey of industrial training programs and organizations, and a report on apprenticeship programs in Western New York.

Work is continuing on a number of projects such as the analysis of collective bargaining contracts and the preparation of data covering the extent and scope of collective bargaining in New York State, collective bargaining by trade associations, and wages, prices, and profits in selected industries. Plans for the development of teaching materials for use in extension courses are being formulated. Work will also go forward on a study of labor-management production committees.

Plans are being made for establishing two series of bulletins. The research series would include bulletins and mimeographed reports of research findings, the results of special studies, etc. and would be of primary interest to the professional staffs in business, labor, government, educational institutions, etc. It is hoped to have such research bulletins in all the major areas of the work of the School. The Extension bulletins would be less directly related to original research and would provide simple understandable coverage of various areas and developments in industrial and labor relations, such as legislation, social security, the functions and responsibilities of shop stewards, the functions and responsibilities of foremen, contract making, industrial safety, arbitration, etc. Such publications will have a relatively wide distribution and will be used as teaching material in extension courses.

The resources of the Library have been considerably increased during the year and now comprise approximately 8,500 catalogued books; 4,500 books not yet catalogued; 4,500 volumes of federal, state, and international documents; 1,000 bound periodicals; and 45 file drawers of pamphlets and documentary material. Current material regularly received includes 239 periodicals, 176 journals, 54 press release services, and 30 labor-management services. In order to overcome some of the difficulties in acquiring certain types of historical and other materials, considerable use is being made of microfilm. A microfilm record of collective bargaining agreements in the files of the Bureau of Labor Statistics for the years 1941 through 1945 has been obtained and microfilm files of 40 important labor union journals have been added to the collection.

The services offered by the School through its Library have been expanded to meet the requirements of its research and information, resident instruction, and extension programs. Reference and loan service is now being extended to individuals, organizations and groups in New York State as part of the School's research and information program. Abstracts of current periodical literature are regularly issued by the Library for the information of the staff, and lists of new acquisitions are distributed periodically to the staff and to interested libraries and organizations. A comprehensive list of current publications for the **INDUSTRIAL AND LABOR RELATIONS REVIEW** is prepared by the Library. Compilation of directory information on labor organizations to supplement published directories and lists is now in process. Plans have been developed for the preparation of bibliographies and indexes of material in the library collection relating to fields of interest within the School. These bibliographical tools will greatly increase the usefulness of the Library collection to the staff engaged in research.

EXTENSION

One of the important phases of the School program is the Extension work carried on in industrial centers throughout the State. Representatives of labor, management, and the public have participated extensively in such programs which have numbered 124 for the year 1947-1948 in comparison with 63 in the preceding year.

In each community the Extension program has been developed on request and after discussion with the various interested groups. Four general types of programs were conducted:

- (a) Lecture series for labor, management, and the public.
- (b) Classes for labor, management, and the public.
- (c) Specialized programs to meet specific educational needs of labor and management groups.
- (d) Conferences and institutes.

- ILR 80 Industrial & Technical Education in the United States
- ILR 81 Job Analysis
- ILR 82 Industrial Plant Training for Workers & Supervisors
- ILR 83 Curriculum Construction in Industrial & Technical Education
- ILR 130 Supervision of Industrial and Technical Education
- ILR 99 Special Studies

For purposes of graduate work the fields of Industrial and Labor Problems and of Economic and Social Statistics are available as minors. The following seven fields, in each of which one or more advanced classes or seminars is offered, are available for either graduate majors or minors:

- Collective Bargaining, Mediation and Arbitration
- Human Relations in Industry
- Industrial Education
- Industrial and Labor Legislation and Social Security
- Labor Market Economics and Analysis
- Labor Union History, Organization and Operation
- Personnel Management

One of the significant features of the work of the School has been the increasing degree to which students elsewhere in the University are taking one or more courses in the School of Industrial and Labor Relations. At the undergraduate level, one course, ILR 10, is made available exclusively to students outside the School. The following tabulation lists selected courses given in the School with the registrations from outside the School for the current School year:

ILR 10	Survey of Industrial and Labor Relations.....	49
ILR 21	Economics of Wages & Employment.....	20
ILR 40	Statistics.....	68
ILR 41	Intermediate Statistics.....	18
ILR 44	Human Relations in Industry.....	65
ILR 45	Personnel Management.....	23
ILR 61	Collective Bargaining.....	7
ILR 68	Public Relations.....	10
ILR 70	Administrative Practices & Procedures.....	7
ILR 72	Civil Rights in Industrial and Labor Relations.....	10
ILR 82	Organization of Training in Industry.....	10
ILR 88	Instructional Methods in Business & Industry.....	9

One of the important features of the training received by undergraduates students at the School is the summer work training program. All students are required to spend two summers in obtaining such work experience and to spend a third summer in similar fashion unless they have had substantial experience prior to their enrollment in the School. As a step in strengthening this important requirement, three hours of credit have been attached to each of the two summers of work required of all students but without curtailing the other requirements for graduation.

RESEARCH, INFORMATION, AND PUBLICATIONS

With the appointment of a Director of Research effective September 1, 1947, the research, information and publications work of the School began to receive increased attention. The basic plan for research contemplates that most of the work will be done by the teaching staff in their respective fields of interest. This means that teaching schedules must be arranged to provide adequate time for this function. In addition, there has been appointed a small group of persons who give full time to research, information and publications.

Publications by the School during the current academic year have been limited to the Industrial and Labor Relations Review, a quarterly which is the first in this field from a national, professional point of view, and to the second report on the summer work program. Four issues of the Review have appeared. This publication has a list of approximately 2,400 subscribers.

Manuscripts for several bulletins and reports are now in the process of editing. These include two reports on conferences, a bibliography on in-plant training

APPENDIX XVI

REPORT OF THE DEAN OF THE SCHOOL OF BUSINESS
AND PUBLIC ADMINISTRATION

To the President of the University:

SIR: I have the honor to present this report of the School of Business and Public Administration for the academic year 1947-1948.

THE STUDENT BODY

At the opening of the school year, 96 students were registered for full time instruction in the School. The second year class numbered 33, all of whom subsequently obtained Masters' degrees in June. The first year class numbered 62 of whom 29 were double registrants from the following undergraduate divisions of the University: Arts and Sciences, 23; Agriculture, 3; Hotel Administration, 2; Engineering, 1. The 33 members of the second year class had their undergraduate preparation at 10 different colleges or universities. In the first year class, 17 different colleges or universities are represented. In the class which will enter in September 1948, all indications are that approximately 30 institutions will be represented. I am much pleased that we are steadily widening our range of appeal.

The members of this year's graduating class have been highly successful in obtaining employment. Twenty-five of them will work for private concerns, six for public agencies (federal and state), and two are as yet undecided as to their employment. The salaries being paid to members of this first graduating class compare most favorably with the general level of salaries now prevailing for graduates of schools like ours. I must emphasize, however, my belief that the real test of our success will be shown only by what our graduates are doing, by what they are accomplishing ten and twenty years from now, not by the salaries at which they find employment upon graduation.

The quality of applicants for admission to the School in September 1948 is gratifyingly high. We shall have our full allotment of students and they will be of good quality. I suspect, however, that a real testing period lies just a year or two away. As the benefits of the so-called G. I. Bill of Rights expire, we shall be faced with a real problem in the light of the fact that our tuition and fees now run to something over \$650 a year. This is not a problem that is peculiar to the School of Business and Public Administration or to Cornell, but, as a new, young school with a reputation still to win, we may find the going a bit hard two or three years from now. Fortunately, our good friends, Mr. Fred Murphy and Mr. Claude C. Harding and their company, the Grolier Society, have continued to provide us with scholarship funds. Twelve students received appreciable assistance from these funds during the past year. I hope that an ever-widening circle of such friends will make it possible for us to help an increasing number of deserving young men and women in the years that lie ahead.

THE FACULTY AND THE CURRICULUM

We have made three appointments to the faculty of the School, effective July 1, 1948. Melvin G. de Chazeau will come from the University of Chicago as Professor of Business Economics and Policy. Arthur E. Nilsson will come from Oberlin College as Professor of Finance. Schuyler Hoslett will come from graduate work at Ohio State University as Assistant Professor of Administration. All of these men have had sound academic training and outstanding non-academic experience in the fields they will cover. I am confident that they add greatly to the strength of our faculty, a faculty in which I already take pride. In passing I should like to comment on the great assistance given us during the past year by Professor Ralph Epstein of the University of Buffalo who, at considerable hardship to himself but with great benefit to our students, traveled from Buffalo to Ithaca and return every Friday during the second term to teach two key second year courses. His contribution to the training of our first graduating class has been great indeed.

Total registration in the four lecture series given in different communities during the year was 1,271. The following addresses by members of the School staff at Elmira illustrates a typical lecture series. In this instance the average attendance was approximately 450.

1. "The Future of Labor-Management Relations"—Nov. 10, 1947.
2. "Production, Prices, and Wages Today"—Nov. 17, 1947
3. "Human Relations in Industry"—Nov. 24, 1947
4. "Organized Labor, Management, and the Community"—Dec. 1, 1947
5. "The Wagner Act and the Taft-Hartley Act"—Dec. 8, 1947
6. "Objectives of Labor and Management in Industrial and Labor Relations"—Dec. 15, 1947

A large part of the Extension program has been represented by organized evening courses usually meeting one evening a week for a period of from four to ten weeks. The subjects have included Organized Labor, Management, and the Community; the Labor-Management Relations Act of 1947; Human Relations in Industry; the Economics of Employment and Unemployment; Personnel Management; The Role of Foremen and Shop Stewards in Industrial and Labor Relations; Parliamentary Law and Public Speaking; Job Evaluation; Employee Selection and Placement; New York State Labor Legislation. Some of these courses are primarily of interest to persons engaged in union work. Others are of primary interest to those in management. Such programs, however, have normally been broadly publicized and have been open to persons from labor, management, and the general public. The 74 such classes given during the year had a registration of 2,495 persons.

Growing out of the progress and experience achieved through the above types of Extension program, specialized programs in the same fields have been developed to meet the needs of special occupational groups both for management and labor. In some instances these programs have been joint as between Labor and Management. Frequently, they have been set up primarily for management representatives, such as foremen or for labor representatives, such as shop stewards. There was a registration of 1,588 in the 44 such programs.

Two conferences, one for plant training directors, the other, a general labor-management conference, were held in Ithaca during the year with an enrollment of 435. An increased number of such conferences are planned for the future and a number of one, two, and three day institutes will be held throughout the State.

One of the important developments in the Extension program during the year was the initiation of work in New York City. Seventeen specialized programs primarily for secondary level representatives of labor and management were conducted on subjects closely related to the employment experience and needs of the individuals concerned. Most of the courses related to labor law, human relations, and grievance procedure with emphasis on practical applications. The seventeen courses had an aggregate enrollment of more than 600 students.

The Extension program of the School has received wide-spread acceptance and support from labor, management, and the public, both in New York City and up-State. The demand for such education far exceeds the present resources of the School. It is hoped that it will be possible to expand this phase of the work of the School to meet the educational needs of the increasing number of individuals throughout the State who turn to the School for education in industrial and labor relations.

M. P. CATHERWOOD,
Dean of the School of Industrial and Labor Relations.

Our equipment is good but our space is limited. In two more years this will present us with a real problem.

Our library is growing steadily. This, too, will present us soon with a space problem. The stack facilities adjoining our reading room are quite small and are already beginning to bulge. Beginning July 1, 1948, we are turning the operation of our library over to the University Library. Mr. McCarthy has obtained the services of an assistant librarian who will give all his time to looking after our needs. I am sure that under the able and energetic direction of the present top University Library staff we shall be well taken care of. But they will need space if they are to do the kind of job for us that I know Mr. McCarthy wants to do.

In closing, I want to express my great appreciation for the assistance which you personally have given the School during its formative years. You have been unfailingly understanding of our problems and our needs. Moreover, the members of your administrative staff have helped us greatly during two years that would otherwise have been difficult ones. I refer particularly to the Provost's office, to Buildings and Grounds, to the Purchasing Department, to the Treasurer's office, and to the Auditor's office. The work of all these people for us has been consistently effective, and their attitude toward us uniformly helpful and friendly.

PAUL M. O'LEARY,
Dean, School of Business and Public Administration.

APPENDIX XVII

REPORT OF THE DIRECTOR OF THE SCHOOL OF EDUCATION

To the President of the University:

SIR: I have the honor to present the report of the School of Education for the academic year 1947-1948.

The past year has been characterized by a trend toward a more wholesome equilibrium in the teacher training and teacher placement field in the School of Education. There has been a reduction of approximately 600 in the number of requests for teachers and an increase in the number of students electing courses in this field on both the graduate and undergraduate levels. Candidates for the doctorate increased from 45 last year to 71 this year. Most of these elected the Ph.D rather than the Ed.D. degree. The distribution of student enrollment is shown in the following table:

GRADUATE STUDENT ENROLLMENT

	<i>First term</i>	<i>Second term</i>	<i>Total</i>
I. No. of different students registered:			
a. With Education* as a major.....	111	116	143
b. With Education* as a minor.....	35	25	41
II. Number who are candidates for:			
a. Ph.D. or Ed.D. (Major in Edu.).....	44	40	57
b. Ph.D. (Minor in Education).....	13	6	14
c. M.A. or M.S.	38	36	50
d. M.S. in Ed. or M.Ed.	45	44	47
e. Other degrees.....	4	6	7
f. No degrees.....	2	9	9
III. Geographical Distribution			
a. Number of different states represented.....	25	30	33
b. Number of foreign countries represented.....	8	6	8
c. Number from New York State.....	71	66	95

*Education or Rural Education.

We have continued to receive close and friendly cooperation from the Law School where our course in Legal Problems of Business is given by Professor Curtiss and where our students are admitted to the regular courses in Constitutional Law and Administrative Law. Consequently, I am glad to report that we are now able to help the Law School. During the spring term, Professor Shannon of our faculty gave a special course in Accounting to law school students. Almost 90 students registered for the course and it seems to have been very well received by Law School students and faculty. It will be repeated during the coming year.

Professor Schaaf gave for the first time this year a special course in Administration for seniors in the School of Industrial and Labor Relations. The course was repeated in the second term and it will again be offered during the coming year. A number of our students have taken work in several courses offered in the School of Industrial and Labor Relations. I feel sure that the two schools will continue to render each other useful reciprocal services.

On April 18 you announced the reorganized and expanded program of international studies for selected students in Law, and Business and Public Administration. This program will supplement the basic studies in the Law School and the School of Business and Public Administration. Law students participating in the program will receive the law degree "with distinction in international law and affairs," and will be qualified to take the usual bar examinations and to be admitted to state and federal bars. Students in the School of Business and Public Administration will be eligible for the degree of master of public administration with a concentration in international administration. Much credit for working out the details of the program must go to Professor Sutherland of the Law School, Professor Schaaf of our School, and Professor Briggs of the College of Arts and Sciences. Dean Stevens and I have followed the development of the program closely and will continue to do so. We expect it to make a significant contribution to the work of the University. In passing I might remark that while working on this program Professor Schaaf found time to write a play with an international relations theme. It will be produced by two summer theaters and in the Fall will be produced in New York by the Provincetown Playhouse.

Professor Sayre and I have served as consultants to federal government agencies during the past year, he quite extensively to the Atomic Energy Commission and the Department of State, and I much less extensively to the National Security Resources Board.

RESEARCH GRANT

In December 1947, the School joined the Littauer School of Harvard University, the Maxwell School of Citizenship and Public Affairs of Syracuse University, and the Woodrow Wilson School of Public and International Affairs of Princeton University in seeking a grant from the Carnegie Corporation. The purpose of the request was to obtain funds to carry out a project for gathering cases in the field of public administration. As you know, the case method of instruction has been widely used in schools of business administration. Little use has been made of cases in public administration. The four schools hope and expect to compile 150 or 200 good cases centered around the activities of public agencies, federal, state, local, and international. The Carnegie Corporation has given us a grant of \$100,000 to be spent during the next three years. We have set up a Washington office and work is now well under way, under the capable supervision of Mr. Harold Stein as Executive Director. Members of our faculty will assist with the project.

The School expects to develop its research program further during the coming year. I am hopeful that we can develop something like the Associates of the Harvard Business School as a source of funds for carrying forward a broad program of research and publication.

SPACE AND EQUIPMENT

Our quarters in McGraw Hall have been made reasonably adequate and comfortable as a result of work done last summer by the Department of Buildings and Grounds. Recently we have had to take one corner of the reading room for two new offices, but the reading room space is still adequate for the size of our student body. But we are already beginning to crowd our classroom and office facilities.

PRESIDENT'S REPORT

October 1, 1947, Frederick H. Stutz was appointed Assistant Professor in the School of Education.

November 1, 1947, Assistant Professor John E. King accepted an appointment as academic dean at the Duluth Branch of the University of Minnesota, leaving a vacancy in the field of Secondary Education.

January 1, 1948, Associate Professor W. A. Smith was appointed Director of Extramural Courses by the President to succeed Assistant Professor John E. King.

April 1, 1948, Assistant Professor A. Gordon Nelson was promoted to the rank of Associate Professor.

June 30, 1948, Professor A. L. Winsor resigned as Director of the Veterans Advisement and Guidance Center at Cornell.

Professors E. R. Hoskins and A. L. Winsor were granted sabbatic leave during the fall and spring terms, respectively.

PLACEMENT SERVICES

While the number of requests for teachers coming in to our placement office remains far above our supply, there is an encouraging reduction this year over the number last year. We received 3,106 notifications of positions, and placed 143 people, mostly in college or secondary school positions.

PLACEMENTS OF THE BUREAU FROM JUNE 1, 1947 TO MAY 31, 1948

<i>Field</i>	<i>College</i>	<i>Secondary</i>	<i>Elementary</i>	<i>Totals</i>
Administration.....	0	4	1	5
Agriculture.....	3	24	0	27
Art.....	0	3	0	3
Coaching.....	1	0	0	1
Education.....	3	0	0	3
Elementary.....	0	0	3	3
English.....	10	11	0	21
Guidance, Personnel, etc.....	1	7	0	8
History.....	4	2	0	6
Home Economics.....	2	21	0	23
Languages.....	3	5	0	8
Mathematics.....	2	2	0	4
Mechanical Technology.....	2	0	0	2
Radio.....	1	0	0	1
Sciences.....	6	8	0	14
Social Studies.....	1	9	0	10
Sociology.....	2	0	0	2
Speech and Drama.....	2	0	0	2
Totals.....	43	96	4	143

The services of the Educational Placement Bureau are now being used by most of the departments of the University whose graduates expect to teach. College and University administrators seeking candidates for teaching positions expect assembled credentials to be made available on request, whether the candidate is in education or a subject matter field. With a full time director of the Bureau, we hope to be able to make the assembling of prospective teachers' credentials available to all individuals in the University who anticipate employment as teachers.

A. L. WINSOR,
Director, School of Education.

INDUSTRIAL EDUCATION

In the field of Industrial Education marked progress has been made in developing this work in the School of Industrial and Labor Relations, and in servicing teachers of institutes and teachers in Industrial Education. Through extension courses, summer courses, conferences, and extramural courses, many of the teachers of the State have received direct help. Large numbers of students seeking advanced degrees in this field have profited by the enriched curriculum of the I and L R School and the opportunities provided for related courses in other colleges of the University.

HOME ECONOMICS EDUCATION

The department of Home Economics Education has been strengthened through the inclusion of Extension Education as one of its functions. In cooperation with the State Department and national organizations, special conferences for Home Economics teachers, and workshops in Family Relations for teachers of Home Economics have been conducted on the campus. The inclusion of this department in the College of Home Economics has had a wholesome effect on the morale and effectiveness of the staff, and insures better cooperation with the related fields in that College.

RURAL EDUCATION

Through its Bureau of Research and Service, the department of Rural Education has been enabled to expand its services to the University staff. Large numbers of individual faculty members, as well as departments and colleges, are finding use for the service this Bureau is prepared to provide. Since the director carries a full teaching and research load, the number of new projects that can be undertaken is limited.

During the past year the requests by students for help with their reading problems indicate a need for a remedial reading program at Cornell. Approximately fifty individuals were given some help during the year. If students with this type of handicap are to be admitted to the University, some effort should be made to help them.

The division of Agricultural Education has added additional staff and has improved its program of upgrading teachers of vocational agriculture by issuing a new publication designed to describe and interpret appropriate current data coming from the laboratories of the College of Agriculture.

ARTS AND SCIENCES EDUCATION

The teacher training program for students in the College of Arts and Sciences has been reorganized and revitalized as a result of the appointment of Professor Stutz to that College faculty, and Professor Schmidt to the faculty of the College of Agriculture. Students desiring to prepare as teachers of English, Mathematics, Social Studies, Language, or Science now have a properly supervised program limited only by the training facilities provided by the Ithaca School System and near-by schools.

FACULTY CHANGES

On June 30, 1947, John Mack, instructor in Rural Education, resigned to take a position with P and C Foods. Louis A. Preston was appointed to take his place.

July 1, 1947, Professor A. L. Winsor resigned as Director of Extramural Courses and Assistant Professor John E. King was appointed by the President to succeed him.

August 16, 1947, Clyde B. Myers was appointed to succeed Clarence K. Schultz as Chairman of the Placement Bureau. Dr. Schultz resigned to become Head of the Department of Education at Wittenberg College.

October 1, 1947, Eva Gordon was promoted from the rank of instructor to that of Assistant Professor.

October 1, 1947, William R. Kunsela was appointed instructor in the department of rural education to continue the work in Agricultural Education formerly done by Professor Roy A. Olney.

INSTRUCTION

In the course of the year eight students received the degree of Master of Nutritional Science and three the degree of Master of Food Science. The registration in the School as of June 1948 was as follows:

Single registrants,	
Master of Nutritional Science.....	16
Master of Food Science.....	9
Double registrants,	
Master of Nutritional Science.....	6
Master of Food Science.....	5
Special students.....	3
Total.....	39

The registration accepted for the fall of 1948-1949 includes 38 single registrants, 5 double registrants and 1 special student.

In addition to the expanded teaching program in the field of medical nutrition previously mentioned, plans have been drawn for a special curriculum leading to the degree of Master of Nutritional Science for the training of extension specialists in the field of nutrition.

RESEARCH

A three-year research program on food freezing facilities, services, and techniques, sponsored by nine electric power companies in New York State, is now nearing completion. During this period more than 1,000 home freezers have been placed in homes in the Ithaca area. Interviewers have visited 750 of the families which have acquired a freezer since 1946, and most of the families have been re-visited a year later to see if the consumer's ideas on freezing and freezers had changed with experience.

A number of supplementary laboratory studies on freezing have been conducted. Of 17 research projects involving the cooperation of workers throughout the University and initiated under the sponsorship of the public utility companies of the State, 5 have dealt with economic phases, 2 with engineering, 2 with production, and 8 with processing of frozen foods. Twenty-seven publications in scientific journals, trade papers, extension bulletins, and farm magazines carry a record of progress on the diverse researches, and others are in preparation.

With the support of funds from the Consolidated Edison Company of New York, a colored sound movie on "Cutting and Wrapping Meat for the Freezer" was prepared to aid in educating locker operators and consumers in the art of successful cutting, processing, packaging, and freezing of meat, fish, and poultry. A companion film on "Freezing Fruits and Vegetables at Home", prepared in 1946, has received first prize in a nation-wide judging of university films and has been shown to an audience of some 100,000 people.

With the support of fellowship grants from the Philco Fund, basic studies have been conducted on changes in folic acid during the cooking of frozen vegetables, on frozen food purchases in Syracuse, New York, and on the use of the electric hygrometer in the determination of water vapor transfer at below-freezing temperatures.

Studies on precooked frozen foods under the sponsorship of the Office of Naval Research have indicated that while many different products can be advantageously processed in this manner, others are unsuited to the process unless special techniques can be devised to prevent undesirable changes in quality. The need for storage of precooked frozen meals at a maximum of 0° F. is clearly indicated.

With the support of the Office of Naval Research studies have been continued dealing with the teeth injuries resulting from the consumption of acid beverages and with dietary measures for the prevention of these injuries.

Further progress has been made in the differentiation and isolation of the three, and possibly four, unknown B-vitamins, in studies supported by a grant from the Nutrition Foundation and from the Snyder Fund.

A grant from the Nutrition Foundation is also supporting studies dealing with the causes of abnormal calcifications in guinea pigs resulting from special diets and their possible relationships to certain similar calcifications in man.

APPENDIX XVIII

REPORT OF THE DIRECTOR OF THE SCHOOL
OF NUTRITION

To the President of the University:

SIR: I have the honor to present the report of the School of Nutrition for the year 1947-1948.

SAVAGE HALL

The most important event of the year for the School was the completion and occupancy of its new home—Savage Hall. Classes were held in the new building for the first time on September 27. It was formally dedicated on October 10 with very impressive ceremonies. At this dedication Governor Thomas E. Dewey and other speakers, before a capacity audience in Bailey Hall, stressed the School's opportunities and responsibilities for the improvement of human welfare.

Savage Hall, with its 2,200 sq. ft. of floor space completely furnished with the most modern equipment, adds greatly to the teaching and research resources of the School. More important, it provides a center which is enabling the School to serve much more effectively in integrating the campus-wide food and nutrition resources for an overall program.

STATE APPROPRIATION FOR THE SUPPORT OF THE SCHOOL PROGRAM

Another event of special significance was the receipt by the University of an appropriation of \$100,000 made available by the Governor and the Legislature "for a contribution in aid of research and training in nutrition by the School of Nutrition in cooperation with the State Department of Health." This appropriation is available for the State fiscal year April 1, 1948 to March 31, 1949. It is being used to stabilize the School's program by making it less dependent on outside grants and to expand its activities in both teaching and research.

Such an expanded program in the field of medical nutrition, to be carried on under the general supervision of Dr. Norman S. Moore, has been worked out in close cooperation with the State Department of Health. The teaching program involves additional course offerings, including field experience for the training of nutritionists for health agencies, and refresher courses for personnel of the Department of Health. The School and the Department will also cooperate in an extensive research program dealing with the nutritional status of the State's population and also with the relation of nutritional status to clinical progress in certain groups of patients who are under the care of the Department. The cooperative activities which have been thus been worked out should serve to attract increasing numbers of students to the School for instruction and research in medical nutrition.

In the food field the School's "across-the-board" research dealing with the processing and marketing of a more nutritious and palatable food supply will be further expanded, as a service to agriculture, industry, and consumers.

NEW YORK STATE FOOD COMMISSION

In October 1947 Governor Dewey created a State Food Commission to deal with problems growing out of the increased need for food shipments abroad, despite shortages at home. The Director of the School was appointed a member of the Commission and the resources of the School were drawn on heavily in carrying out the program developed. The School served as the central source of technical information for the program, prepared educational material, and participated in a survey of the nutritional status of the State's population.

APPENDIX XIX

REPORT OF THE DIRECTOR OF THE SUMMER SESSION

To the President of the University:

SIR: I have the honor to submit on behalf of the Administrative Board of the Summer Session the following report for the Session of 1947.

By action of the Board of Trustees, the following appointments were made to the Administrative Board: Professor Margaret Hutchins, to replace Dean Sarah G. Blanding, resigned; Professor F. A. Southard, Jr., to replace Professor E. J. Simmons, resigned; Professor J. R. Moynihan to replace Professor Southard, leave of absence; Professor M. L. Hulse to replace Professor James Hutton, term expired; Professor A. L. Winsor to replace Professor A. W. Gibson, term expired.

As the tables on the following page indicate, the Summer Session, 1947, exceeded in total registration that of 1946, and therefore that of any previous session, by almost 500 students. Of the total, 2,725, there were 1,025 graduate students. Nearly a hundred courses and sixty-two faculty positions were added. Our registrations do not include those who took summer terms in the Colleges of Engineering or Architecture and the Law School, and students who worked under personal direction in the Graduate School. The number receiving instruction on the campus during July therefore exceeded 3,500.

For the first time, the New York State College of Industrial and Labor Relations was a cooperating unit in the Summer Session, offering courses in Industrial Management, in Human Relations in Industry and Workers Education, as well as an Introduction to the Field of Industrial and Technical Education. The program of Industrial and Technical Education expanded decidedly, with eleven formal courses and a number of special studies. The new Division of Modern Languages inaugurated a Chinese Language Institute, extending through twelve weeks, for the purpose of preparing prospective business travelers and Civil Service workers in colloquial Chinese so that they might use the native language in China. Other new courses which suggest changing needs were: Foundations of Western Thought (planned by the Department of Classics); Russia in the Twentieth Century; United States and Latin America in the Twentieth Century; Legal Problems of the School Administrator; Research and Writing in Outdoor Education; Home Freezing of Foods.

Such a list, which might be extended, indicates a post-war evolution in summer instruction. With the virtual elimination of underclass instruction, as reported to you a year ago, summer work is more and more directed to the mature professional worker who wants to use the unique facilities of this University to satisfy his special needs as a worker and citizen. The number of applicants from government and industry is greater than ever before. Graduate and adult education is now of first importance. In this respect, you may note that although the number of teachers in attendance increased, it has not yet reached its prewar proportion. No doubt the fluctuation in that profession and the unadjusted salary scales account for the lag. Nevertheless, the relationship between the University and the preparatory schools and communities which these registrants establish and perpetuate is vital to all parties. For the University, each registrant is a potential and informed adviser of college-preparatory students; for the community, each teacher serves to disseminate those results of scholarship and research which the University has fostered. We of the Administrative Board have reason to hope that another year will see this registration proportionately strengthened.

A Postsession, running six weeks from August 11 to September 19, limited to undergraduate men matriculated in Cornell colleges who successfully completed a full program in the regular session, registered 238. This Postsession was primarily attended by exservicemen who needed to accelerate their collegiate program. The Board plans to eliminate the Postsession after the summer of 1948.

Data on attendance and distribution of information follow.

The School is cooperating with the Colleges of Agriculture and Home Economics in an investigation designed to correlate and evaluate three methods used in studying nutrition status, namely: dietary studies, blood nutrients as measured by microchemical techniques, and state of health as measured by medical examinations.

DIET TABLE AND COUNSELING SERVICE

The Diet Table, supported by the Gannett Research Grant, has had one of its best years of operation, serving a total of 13 men and 17 women. Conditions calling for special diets have included: diabetes, ulcers, colitis, allergies, and a fractured jaw. High caloric, high protein, high iron, and reducing diets have been called for by other conditions.

Nutrition counseling is now a firmly-established part of the health program. Some 115 new students (46 men and 69 women) have been helped during 1947-48. In addition there were 248 return visits for further observation and counseling. The range of help needed was wide, including: food budgetary problems, allergy, anemia, elimination diets, analysis of food intake, high protein diets, functional gastro-intestinal problems, diabetes, dental referrals, general "poor eating", ulcers, colitis, and the usual problems of weight gain and weight loss.

SPECIAL GRANTS

In addition to the previously mentioned appropriation from the State of New York the following grants have been received by the School during the fiscal year 1947-1948:

\$5,000 from Mr. Frank E. Gannett in further support of cooperative research studies dealing with special dietary problems of Cornell students.

\$29,590 from the Buffalo-Niagara Power Corporation, Central Hudson Gas and Electric Corporation, Central New York Power Corporation, Consolidated Edison Company of New York, Inc., Long Island Lighting Company, New York Power and Light Corporation, New York State Electric and Gas Corporation, Rochester Gas and Electric Corporation, and Staten Island Edison Corporation to continue support of laboratory and field studies on food freezing.

\$4,000 from the Office of Naval Research in further support of an expanded research program on precooked frozen foods.

\$1,000 from the Harry Snyder Research Fund to study factors required for prevention and correction of anemias in humans.

\$2,700 from the Nutrition Foundation for continuation of studies dealing with the dietary causes of abnormal calcification in guinea pigs.

FACULTY CHANGES

During the course of the year the following members of the Faculty resigned to accept positions elsewhere: Associate Professor Gortner to join the staff of the Pineapple Research Institute; Professor I. C. Gunsalus to become Head of the Department of Bacteriology at Indiana University; Associate Professor Karl C. Hamner to become Head of the Division of Botany at U. C. L. A.; Associate Professor J. M. Lawrence to join the staff of the University of Washington.

The following new appointments have been made: Dr. P. E. Ramstad as Associate Professor of Biochemistry replacing Dr. Gortner; Dr. S. E. Smith as Associate Professor of Animal Nutrition; Mrs. Kathleen Berresford as Instructor in Medical Nutrition; Miss Yoshi Nakayama as Research Librarian; Miss Vivian Lightbody as Research Associate in Nutrition.

Professor L. C. Norris, who has served so effectively as Secretary of the School from the time of its organization, was relieved of his duties at his request, and Associate Professor W. L. Nelson was appointed as Acting Secretary accordingly. Dr. Norris continues as a member of the Faculty and as a member of its Committee on Admissions and Counseling.

L. A. MAYNARD,
Director of the School of Nutrition.

APPENDIX XX

REPORT OF THE DIRECTOR OF MILITARY TRAINING

To the President of the University:

SIR: I have the honor to submit this report of the Department of Military Science and Tactics for the academic year 1947-1948.

GENERAL

The academic year 1947-1948 continued under the postwar program for all ROTC units. The hours of instruction for each subject for each year were set forth in War Department directives and universities were allowed a variance of ten per cent in the hours thus assigned. Due to the 15-week semester at Cornell all instruction was curtailed up to this permissible ten per cent.

The course was carefully planned and instructors prepared detailed "lesson plans" for each period of instruction given. Special emphasis was given visual training aids and profuse use was made of sound moving picture films, film strips, charts, maps, and the blackboard. Most of the charts used were prepared under War Department supervision, but some were prepared by the Training Aid Section of this Department.

The ROTC library established last year at Barton Hall continued to grow, with the assistance of University Library personnel, and now contains 320 volumes of reference and reading material on military subjects. The library is used for reference by students and the ROTC Faculty.

A course in World Military Situation was conducted as a lecture course given under the supervision of the College of Arts and Sciences, to the Freshman class as a unit, in Bailey Hall, one evening a week. The following members of the University Faculty conducted the lectures in this course: Professors O. D. vonEngeln, H. W. Briggs, G. P. Adams, L. Sharp, F. G. Marcham, E. W. Fox, Victor Lange, Mario Einaudi, M. Szeftel, and K. Biggerstaff.

Professor R. P. Feynman spoke on "The Development and Future Aspects of the Atomic Bomb", and Professor A. W. Smith lectured on Personnel Management. Mr. R. B. Meigs, University Counsel conducted the course on Military Law and Boards for the advanced students, and Dr. E. C. Showacre, of the University clinic, was consultant for the course in Hygiene and First Aid for the Freshman students. Lt. Comdr. E. S. Memel, U. S. Navy, delivered one of the lectures on Evolution of Warfare. The above named personnel contributed in a major way to the success of the instruction given throughout the year and proved an invaluable asset to this department. This cooperation and assistance by these individuals and respective academic departments is deeply appreciated.

An officer from the Armed Forces Special Weapons Project, Washington, D. C., conducted a lecture on present day Military Problems of the United States for the advanced course.

The ROTC was informally inspected on two occasions by members of the Staff of First Army at Governors Island, New York. The annual formal inspection of the unit occurred on May 20 and 21 and a rating of "Superior" was awarded. Major General Lawrence C. Jaynes, USA, Commanding General, New York, New Jersey, and Delaware Military District, in charge of ROTC affairs accompanied the inspection team. A review in his honor was held on May 20 on the University Quadrangle in front of Goldwin Smith Hall at which time certain awards were made.

The annual Presidential Review of the ROTC was held on the University Quadrangle at 2:30 P. M. on May 28, 1948. The NROTC participated in this review for the first time. Awards were presented to students selected for outstanding performances within the department.

During the academic year many improvements were made in Barton Hall and the ROTC stables.

This department published an Announcement for the 1947-1948 sessions in which a detailed scope of each course is given. A "Standing Operating Procedure" for personnel of this department was also published.

SUMMER SESSION

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ATTENDANCE

	1937	1945	1946	1947
Men.....	1,139	231	1,516	1,834
Women.....	857	839	735	891
Total.....	1,996	1,070	2,251	2,725

ATTENDANCE BY SCHOOLS

	1937	1945	1946	1947
University Summer School.....	1,342	773	1,628	1,953
State Summer School of Agriculture.....	878	383	635	709
State Summer School of Home Economics.....	163	143	193	235
State Summer School of Industrial and Labor Relations.....	...	...	...	118
Summer School of Hotel Administration.....	164	101	206	189
Total.....	2,547	1,400	2,662	3,204
Less double registrants.....	551	330	411	479
Total.....	1,996	1,070	2,251	2,725

ATTENDANCE OF UNDERGRADUATES

	1937	1945	1946	1947
Cornell.....	313	149	1,055	1,221
Other institutions.....	294	377	319	284

CLASSIFICATION OF TEACHERS IN ATTENDANCE

	1937	1945	1946	1947
Colleges and Universities.....	137	27	104	117
Junior and Senior High Schools.....	635	102	300	315
Principals, Superintendents, Supervisors.....	87	37	43	41
Grade School.....	91	24	28	40
Others (Normal Schools, Junior Colleges, etc.)....	14	161	91	119
Total.....	964	351	566	591

CLASSIFICATION OF STUDENTS BY GEOGRAPHICAL DISTRIBUTION

	1937	1945	1946	1947
New England.....	134	64	175	209
Middle Atlantic States excluding New York.....	272	143	343	426
New York.....	1,194	704	1,236	1,560
South.....	125	61	146	181
Southwest.....	33	10	29	30
Rocky Mountain States.....	11	1	14	9
Middle West.....	140	57	213	193
Pacific Coast.....	12	6	20	30
Foreign Countries and Canada.....	76	24	75	96
Total.....	1,997	1,070	2,251	2,725

DISTRIBUTION OF INFORMATION FROM THE OFFICE OF THE SUMMER SESSION

	Intramural	Extramural
Preliminary Announcement.....	1,904	3,096
Poster.....	64	5,386
Home Economics Announcement.....	104	3,100
Industrial Education Announcement.....	25	3,800
Geology Field Course Announcement.....	...	200
Classics Department Announcement.....	...	200
Extension Education Announcement.....	15	2,950
Hotel Administration Announcement.....	100	2,300
General Announcement.....	2,420	5,800

CHARLES W. JONES,
Director of the Summer Session.

PRESIDENT'S REPORT

ENROLLMENT, 1947-1948

Basic Course

	<i>Enrolled</i>	<i>Completed</i>
1st Year	816	722
2nd Year	438	411
Total	1254	1132

*Advanced Course**First Year*

	<i>Enrolled</i>	<i>Completed</i>
Air	17	13
Artillery	24	16
Ordnance	8	5
Quartermaster	26	18
Signal Corps	5	4
Total: 1st Yr	80	56

Second Year

	<i>Enrolled</i>	<i>Completed</i>
Air	0	0
Artillery	34	31
Ordnance	10	12*
Quartermaster	23	25*
Signal Corps	8	9*
Total: 2nd Yr	75	77

*Increase in completed over enrolled is accounted for by returnees from Leave of Absence.

Sixty-five (65) commissions as Second Lieutenants, Reserve Corps, were conferred on students completing the Advanced Course during the academic year 1947-48. Two (2) graduates were commissioned as Second Lieutenants in the Regular Army.

ACADEMIC CREDIT

The amount of academic credit given for the Advanced Courses by the various schools and colleges in Cornell is, in general, adequate. However, a distinct lack of uniformity exists, some colleges giving adequate credit, while others do not.

The amount of academic credit given for the Basic Course is entirely inadequate, most schools and colleges giving none.

DISTINGUISHED MILITARY STUDENTS

The Department of the Army established during the year 1947-1948 the classification of Distinguished Military Students and Distinguished Military Graduates.

Distinguished Military Students are those students who qualify for consideration for appointment as commissioned officers in the Regular Army or Air Force.

Distinguished Military Graduates are those Distinguished Military Students who have completed the ROTC Advanced Course and received their degree from the University and are qualified for appointment as commissioned officers in the Regular Army or Air Force.

During the academic year 1947-1948, twenty-two students were designated Distinguished Military Students and five (5) students as Distinguished Military Graduates. Of the latter number, three applied for commissions in the Regular Army and two were accepted.

DISTINGUISHED CADETS

During the academic year 1947-48, Distinguished Cadet Medals were awarded to eleven (11) Freshmen, six (6) Sophomores, and twenty (20) advanced course cadets. This honor indicates a high military academic standing, superior leadership qualities, and a minimum of unexcused cuts.

BASIC COURSE

The Basic Course is given to all cadets for the first two years as required by University regulations. This instruction is common to all branches and arms of the Service. About one-third of the hours allocated to this course are devoted to dismounted drill, the other two-thirds being spent in classrooms.

The following subjects were given in the Basic Course:

<i>Subjects</i>	<i>First Year Hours</i>	<i>Second Year Hours</i>
Leadership, Drill and Exercise of Command	33	33
World Military Situation	16	4
National Defense Act and ROTC	4	..
Maps and Aerial Photographs	9	10
Military Administration . . . . .	..	8
Evolution of Warfare . . . . .	..	17
Hygiene and First Aid	10	..
Individual Weapons and Marksmanship	18	..
Military Law and Boards . . . . .	..	11
Physical Development Methods . . . . .	..	7
Total Hours	90	90

ADVANCED COURSE

The units established at Cornell University for Advanced Course instruction are: Field Artillery, Signal Corps, Ordnance, Quartermaster, and Air Force. The Air Force unit specializes in communications work.

The objectives of this course are: (1) to produce college trained Reserve Officers to meet the needs of the Army during the postwar period, and (2) to preserve and expand the Reserve Officers' Training Corps organization in anticipation of post-war Reserve Officer requirements.

Many of the students taking the Advanced Course are veterans of many months service. These men are highly regarded by the Basic students and are making a major contribution to the general efficiency of the Unit.

"Leadership" is emphasized throughout all Advanced Course training and special instruction is given in correct methods of giving commands to a company or battery.

The following subjects were taught to all branches:

<i>First Year Advanced Course</i>	<i>Hours</i>
Military Leadership, Psychology and Personnel Management	16
Leadership, Drill and Exercise of Command	16
Geographical Foundations of National Power	12
Military Law and Boards	12
Tactics and Technique of the Selected Arm or Service*	96
<i>Second Year Advanced Course</i>	152
Command and Staff	12
Military Teaching Methods	12
Psychological Warfare	4
Military Problems of the United States	12
Leadership, Drill and Exercise of Command	16
Military Mobilization and Demobilization	4
Combat Intelligence	4
Tactics and Technique of the Selected Arm or Service*	88
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*Among the subjects covered in Tactics and Technique were: Organization of the Selected Arm or Service; Artillery Tactics; Gunnery; Characteristics and Maintenance of Artillery Materiel; Message Center and Signal Center Procedure; Communication Security; Wire and Radio Communication Fundamentals and Materiel; Ammunition; Automotive Materiel; Artillery Materiel; Small-arms Materiel; Fire Control Materiel; Depot and Station Supply; Property Accountability and Responsibility; Procurement Procedures; Storage, Warehousing, and Materials Handling.

Clef Club: This club is composed of Juniors and Seniors who are members of the Cornell University "Big Red" Band. Its purpose is to further interest in the band and assist this department. It has an enrollment of 28 members.

"Big Red" Band: Upon the recommendation of this department the "Big Red" Band was removed from control of the ROTC during the past year and became a student activity. The ROTC will continue to supervise, administer, supply, and drill the band.

R. O. T. C. Band: An ROTC Band of approximately thirty (30) pieces was organized during the year. This is a distinct extracurricular activity and all band practices are in addition to the regular weekly hours required for military instruction.

Scabbard and Blade: This is a national honorary society composed of selected cadet officers of both the ROTC and NROTC. Candidates are elected to membership by the Society. The Cornell Chapter, Company "C", First Regiment, now consists of 35 members.

RECOMMENDATIONS

That the necessity for a uniform system of academic credit in all of the schools and colleges be recognized and that such a system be adopted.

RALPH HOSPITAL,
Colonel, Field Artillery,
Professor of Military Science and Tactics.

APPENDIX XXI

REPORT OF THE DIRECTOR OF THE DEPARTMENT OF NAVAL SCIENCE

To the President of the University:

SIR: I have the honor to present the report of the Department of Naval Science for the academic year 1947-1948.

The academic year 1947-1948 marked the second year of the new Naval ROTC Program at Cornell University. This Program, which was enacted under the "Holloway Plan", is a Navy peace-time program for supplying officers with civilian backgrounds to the Navy, to work side by side with the graduates of the United States Naval Academy. The Midshipmen who have graduated from this Unit during the past two years have been students who were transferred from the war-time V-12 Program. Students actually enrolled as freshmen under the "Holloway Plan" will not begin to graduate and be commissioned until June 1950.

The academic year 1947-1948 saw the Department of Naval Science stabilize itself after a one-year transition period. The curriculum, laboratory work, and administrative duties became more clearly crystalized and the unit was able to operate at greater efficiency. Now that the first two years have been completed, the foundation for a well organized Naval ROTC Unit at Cornell has been laid and the coming year will see a greater improvement in both the academic instruction and the administrative work.

The past year saw the first awards given to Midshipmen by local civic organizations. The Finger Lakes Post, 961, of the Veterans of Foreign Wars, will present annually a medal to the Midshipman in the graduating class who has the highest average in general over-all excellence. This includes academic grades both in this Department and in his college. In addition, the Ithaca Chapter of the American Legion will present annually two medals to the Midshipmen who excel in pistol and rifle proficiency. This year also marked the first time that the Naval ROTC participated in the Annual Presidential Review.

FACULTY AND STAFF

Changes in the Army commissioned personnel during the year were as follows:

Relieved:

Captain Mortimer J. Hutchison, F. A., August 15, 1947.
1st Lt. Walter Callahan, U.S.A.F., May 1, 1948.
Major Raymond L. Hoff, Q.M.C., June 12, 1948.

Assigned:

Major John M. Hoffman, U.S.A.F., July 1, 1947.
Lt. Colonel Philip B. Stiness, C.A.C., July 17, 1947.
Captain Clyde W. Raybuck, Q.M.C., Sept. 10, 1947.
Major Richard A. Shagrin, C.A.C., Sept. 25, 1947
1st Lt. Walter Mule, U.S.A.F., October 6, 1947
Captain Arthur G. Pinkham, Sig. Corps., October 8, 1947.
Captain Lawrence B. Clark, F.A., January 23, 1948.
Lt. Colonel Victor C. Warren, Sig. Corps., June 12, 1948.

EXTRACURRICULAR ACTIVITIES

The Equitation Course: The War Department maintained 32 riding horses at Cornell during this academic year.

Throughout the year, regular formal riding classes were conducted for about 200 students and credit was given for these classes by the Department of Physical Education.

Polo: The polo team completed a most successful season on March 20, 1948 with a total of seven (7) victories and six (6) defeats. Games were played with Princeton, Yale, University of Miami, Norwich, Ramapo Polo Club, Cortland Polo Club, Virginia Military Institute, and Georgetown. This team was the "Runner Up" in the National Intercollegiate Indoor Polo Championship, which was won by the University of Miami.

Horse Shows: Two horse shows were held in the Riding Hall. In addition to these shows, the 24th annual Cornell ROTC Show was held on the afternoons of May 22 and May 23, 1948 in the Riding Hall, in which eighty (80) privately owned horses were entered in nineteen events. This was the best horse show ever held in Ithaca and was conducted according to the rules of the American Horse Show Association.

Pershing Rifles: Company E, 5th Regiment of the Pershing Rifles, is the Cornell Chapter of a national organization of Elementary students. This company of 50 members is used for demonstrational purposes for the basic students. This year for the first time a competition with companies of the Pershing Rifles from other universities was held at Barton Hall with the Cornell University Company as host. It is expected that this will be an annual event.

The Pistol and Rifle Club: This club is composed of members of the ROTC and others in Cornell who are interested in this activity. It sponsors the Pistol and Rifle teams representing either Cornell in intercollegiate competitions or the Cornell ROTC in competition.

During the period covered by this report the following results of competitions were recorded for both "postal" and "shoulder to shoulder" matches:

	Pistol			Rifle	
	Cornell	ROTC		Cornell	ROTC
Won.....	8	—	Won.....	32	0
Lost.....	6	—	Lost.....	8	4
Total.....	14		Total.....	40	4

Officers' Club: A cadet officers' Club composed of Cornell ROTC and NROTC Advanced Course students is functioning and is a distinct asset to this department. All Advanced Course cadets of the Army, Air Force, and Navy are eligible for membership.

The Navy Department provides these students with uniforms and Naval Science textbooks throughout the four years, and pays them during their third and fourth years the daily value of a commuted ration, or approximately \$30 a month.

Upon receiving their degrees and successfully completing their Naval Science requirements, Contract Students are commissioned as Ensigns in the Naval Reserve or Second Lieutenants in the Marine Corps Reserve and required to retain that status for six years from commissioning. They are not called to active duty except in time of a national emergency.

There are presently 27 continuing students in this category. Approximately 77 Contract Students will be selected from the class entering Cornell in the fall of 1948.

GRADUATES FROM THE PROGRAM

During the last academic year, 5 officers were commissioned as Ensigns in the Regular Navy, and 14 as Ensigns in the U. S. Naval Reserve. These numbers will increase yearly, as this Department builds up to its authorized strength of 300 students.

Summer Training Cruises

A unique feature of this Department of the University, is the summer training cruise which takes our students to many corners of the globe. In addition, practical familiarity with naval installations, customs, and procedures is instilled during this period. The cruises for the current summer are as follows:

(a) Prospective Regular sophomores and seniors are attached to the cruiser U. S. S. PASADENA. They embarked at Treasure Island, will visit Seattle, Long Beach, Pearl Harbor, San Diego, and will disembark at San Francisco.

(b) Prospective junior Regulars are attached to the aircraft carrier U. S. S. BOXER. They embark at San Francisco, will visit Pearl Harbor, San Diego, and will disembark at NAS, Alameda.

(c) Contract Students are attached to the cruiser U. S. S. DULUTH. They embarked at Treasure Island, will visit Victoria, B. C., Long Beach, and will disembark at San Francisco.

ACADEMIC INTEGRATION WITH THE UNIVERSITY

NROTC Students should not be penalized in the matter of degree credits for participating in training for the National Defense.

The superposition of 24 hours of Naval Science classroom work throughout the 4 years course, plus 2 hours of laboratory work a week, upon the degree requirements of the individual schools and colleges places an extremely heavy academic load upon the Midshipman who enters this Unit. I am pleased to report that this problem is currently under consideration by most schools in the University. More departments are recognizing that the NROTC Program is conducted on a college level and that the courses are intellectually comparable with others for which degree credit is granted. Below is a tabulation of the academic credit granted by other departments within the University.

<i>School</i>	<i>Credit Hours</i>
College of Arts and Sciences	18
College of Architecture	24
State College of Agriculture	12
School of Chemical Engineering	6
School of Civil Engineering	4
School of Electrical Engineering	9
School of Mechanical Engineering	8
Department of Hotel Administration	24

Other divisions of the University not mentioned do not presently have Naval Science Students registered and therefore have not been asked for a final decision in this matter.

During the year certain improvements were made in the NROTC Armory, the building referred to as the "Navy Gun Shed" on Campus Road. Additional room is needed in this building however, for holding military formations indoors and for the installation of additional training equipment. The Gun Shed was purchased by the University at the end of the war along with several other items of Navy surplus property. The Gun Shed being of a temporary construction, I do not recommend that any funds be expended to provide more floor area. However, as the NROTC unit expands to reach its 300 maximum, the question of space in the Gun Shed will become more critical. A Naval Science Building which will completely accommodate all activities of this Department is the only ultimate solution.

DESCRIPTION OF THE PROGRAM

A description of the Program and its objectives appear to be in order, since this Department is still not too well known about the campus.

The Naval ROTC Unit at Cornell is one of the fifty-two Naval ROTC's established at the outstanding colleges and universities of the United States. The "Holloway Plan" enacted by Congress, established these units with a two-fold purpose: (1) to supplement the Naval Academy, which is limited because of its size, in supplying the necessary officers for the postwar Navy, (2) to create a reserve of trained officers available for active duty in a national emergency.

The students under this Program are of two types, one called "Regular" and the other "Contract". All, however, are considered as Midshipmen and all pursue the same program at Cornell.

Regular Students

Regular Students are selected by the following process:

- (a) A nation-wide aptitude test administered for the Navy by the College Entrance Board Examination Section.
- (b) Physical examinations and interviews by officers of an Office of Naval Officer Procurement.
- (c) Considered by State boards.
- (d) Acceptance by the college of choice or designation.

Successful candidates may take any course leading to a baccalaureate degree and including certain minimum requirements in mathematics, physics, and English, plus prescribed Naval Science courses for four years. They must participate in a practice cruise or aviation indoctrination cruise of from six to eight weeks' duration during each of three summers.

Uniforms, tuition, usual laboratory fees and \$600 annual retainer pay are provided by the Navy for four academic years.

Upon receiving their degrees and successfully completing the Naval Science requirements they are commissioned as Ensigns in the Regular Navy or Second Lieutenants in the Regular Marine Corps, and take rank and precedence with officers graduated from the U. S. Naval Academy in the same year. They must agree to remain on active service for not less than fifteen nor more than twenty-four months. They may elect to make the Navy a career, and if selected by the Secretary of the Navy to meet the needs of the service are accorded permanent commissions; otherwise, upon the termination of their period of active duty, they are commissioned in the Naval Reserve and required to retain that status until six years from the original date of commissioning.

There are presently 73 continuing students in this category. In addition, 39 Regular Students have already been selected from civilian and Navy sources and have been accepted by Cornell for entrance as freshmen in the fall of 1948.

Contract Students

Contract Students are selected by the Professor of Naval Science at the time of registration in the University. Academic and laboratory requirements are exactly the same as for Regular Students. Contract Students are required, however, to make only one cruise, of about three weeks' duration, normally between their junior and senior years.

of the ROTC and Director of Barton Hall, have we been able to proceed at all with the program during the winter months.

Some day, when a new gymnasium is at our disposal, we shall have the opportunity to effectively put into operation our ideas on physical training, which is more aptly termed physical recreation. The idea is to teach carry-over sports that will be useful and beneficial after college and will create habits of regular and recreative exercise while in college.

The corrective program conducted in collaboration with the Medical Department lists boys with certain disabilities possible of correction, such as excessive obesity, hollow chests, poor arm and shoulder development, and particularly those with lack of coordination. Some of these boys lost as much as 40 pounds during the year by a routine of regular exercise and recommended diet. Of the 77 boys in this group approximately 80 per cent in all classifications showed marked improvement. This is definitely a significant and constructive program—one that should receive every possible aid and support. Additional apparatus and more prepossessing quarters would be welcome stimuli.

The Athletic Association had a busy year and an unprecedented number of spectators attendant at intercollegiate contests. An astounding gross income of \$430,322.30 was more than dissipated by an even more amazing expense figure of \$431,307.88, an operating loss of \$985.58 for the year. As with everything else, the cost of running a large athletic program has increased tremendously but unlike most everything else, we have not raised our prices. Football tickets are still \$3.00 plus tax; student season books are still \$15.00 but there is now 20 per cent tax and the Athletic Association absorbs the tax so we actually receive \$2.50 less from every season ticket than we did prior to 1942.

Our present financial status in the Athletic Division shows \$72,375.26 owing to the University for advances on the cost of new steel stands and press box on the west side of Schoellkopf Field. The total cost of the structure was \$151,255.69 against which an accumulated reserve of \$78,880.43 was applied.

The men's physical education division incurred a deficit of \$10,794.04. This division is supported by student fees of \$10.00 a year. It is not possible to maintain this phase of the work on fees alone unless the fees are raised at least \$2.00 a year. This is likewise true of the women's division.

Success in athletics should not be measured solely on wins and losses but winning teams certainly contribute much to the spirit of the whole campus. Tennis, for instance, never achieved a high degree of popularity or significance on campus until the past two years. Now our championship team attracts very substantial crowds to every match and tennis as a recreational activity has become a most popular diversion among the undergraduates. The team was undefeated in league competition and lost but twice during its 19-game schedule, both of these on the southern trip during Easter recess, to William and Mary and North Carolina.

The basketball team again was runner-up in league play. The ski team won the New York State championship, and swimming, fencing, and crew had very fine records.

It is with confidence that we approach the future and the hope, too, that some day soon we may have adequate indoor space to bring to full realization a more desirable health and exercise program for all Cornell students.

ROBERT J. KANE,
Director of Athletics.

In addition to the above, Midshipmen who are registered in the College of Engineering and who take a basic heat-power course, are exempted from taking "Naval Machinery" during their seventh term in Naval Science. Thus 3 academic hours are removed from the original 24 hours required by this Department.

PHYSICAL FEATURES

During the past year the headquarters of this Department was moved from its former location to 3 East Avenue, to make way for the new Statler Hall. The present headquarters are much larger and more adaptable and will continue to be adequate for many years. Classrooms are available in a very limited way at both 3 East Avenue and in the Navy Gun Shed. However, most Naval Science Classes will continue to be held in Olin Hall, in rooms made available through the courtesy of the Director of the School of Chemical Engineering.

However, the sites now occupied by the NROTC headquarters, and by the Navy Gun Shed in particular, will be required for other new Cornell construction. The classrooms in Olin Hall may be required exclusively for the use of the School of Chemical Engineering sometime in the future. Moreover, the enrollment of the NROTC is increasing, the present student body being approximately one third of the authorized size.

Consolidation of all Naval Science activities in permanent quarters, designed for the purpose, is the only ultimate solution to this problem. Because of this, a project was recommended last year, to provide the necessary accommodations by constructing a wing to Barton Hall. This proposal received the approval of the Central Administrative Officers of the University and of the Board of Trustees and was submitted by the President of Cornell University to the Commissioner of Education of the State of New York. No further developments of this project have been received as of this date. Again this year, the proposal is being considered by the Officers of the University. It is recommended that measures be taken to effectuate this project with a priority consistent with the over-all needs of the University.

CHAS. W. GRAY,
Captain, U. S. Navy,
Professor of Naval Science.

APPENDIX XXII

REPORT OF THE DIRECTOR OF PHYSICAL EDUCATION AND ATHLETICS

To the President of the University:

SIR: The past year probably saw more activity in this department than during any other year in the history of the University.

There were 950 men out for intercollegiate sports; there were 1944 men engaged in physical training classes and 905 registrants in the women's program. The intramural leagues had more participating teams than ever before.

A year such as this one points up more than ever our lack of indoor space for both men and women. Fortunately, we can boast of some of the nicest playing fields of any school of comparable size in the country. Convenient to the campus and wonderfully adapted to many and varied uses, we can feel proud and happy for them. There is no doubt that the unqualified success of our intramural programs is principally due to these superior outdoor facilities.

Physical training has increased its load as the non-veteran students have gradually superseded the G. I. Veterans having been excused from the requirement, the registration was not particularly heavy directly after the war. The total now of almost 2,000 boys taking part each week has posed a real problem in finding indoor space. Only by the handsome cooperation of Colonel Ralph Hospital, Commandant

APPENDIX XXIII

REPORT OF THE CHAIRMAN OF THE DEPARTMENT OF
CLINICAL AND PREVENTIVE MEDICINE

To the President of the University:

SIR: I have the honor to present the report of the Department of Clinical and Preventive Medicine for the year 1947-1948.

This department's chief responsibility is the clinical care of sick students; however since it is the only department at Ithaca concerned with medical matters, it yearly accumulates more functions and responsibilities. In addition to clinical, instructional, public health, and research duties, during the year it has acquired police and monitoring duties. The Atomic Energy Commission, before releasing radioactive isotopes to universities for research, recommended that a medical committee be set up to pass on the prospective use of radioactive isotopes and to enforce monitoring of the facilities and areas where active material was used. Thus Cornell University now has a medical isotope committee charged with the responsibility of enforcing protection against radiation where this protection is required. Other campus-wide functions of this department are discussed in this report under research.

CLINICAL RESPONSIBILITIES

Student Medical Clinic

It is here that the great volume of student-physician contact takes place. It is necessary, therefore, that the physicians of the Clinic organize cooperatively for most efficient teamwork. While each physician has a practice within the Clinic, some physicians have special interests and skills that enable them to give consultation assistance to their colleagues. This has resulted in the formation of specialty clinics to which patients may be referred for diagnosis or treatment. These specialty clinics are held once or twice each week, or daily, depending on demand. While most of these specialty clinics are directed by a full time staff member, some have part time specialists in charge. Following is a brief review of the specialty clinics operated this past year:

The Orthopedic and Athletic Clinic. The athletic physician has had long experience in the handling of injuries. It is logical that many injuries occurring in non-athletic activities should be referred to him. The services of a consultant orthopedic surgeon are provided each month for this clinic. Unusual and difficult diagnostic or treatment problems are discussed with the orthopedic consultant. In the past there has been some confusion as to the dual responsibility of this department and the Department of Physical Education for prevention and clinical care of injuries occurring in athletic activity. A joint committee with representatives from both departments has worked out what are believed to be adequate controls for both prevention and treatment of injuries.

The Skin Clinic is conducted twice each week by a specialist in dermatology and is well attended. While many severe lesions of the skin are observed and treated during the course of a year, the psychosomatic benefits derived from the successful treatment of minor skin lesions continue to be an important feature of this clinic. Careful handling and friendly support in skin problems frequently will make the difference between success or failure in academic work.

The Dental Clinic is operated by a part-time dentist. During the past year the dentist's services were extended by providing him with a nurse assistant who carried on many of the treatments under his direction. During the year this clinic received 2,240 patient visits. Recently, provision was made for the purchase of a shock proof dental x-ray. This purchase will prevent delay when x-rays are required for diagnosis.

Mental Hygiene Clinic. For a number of years the value of the Mental Hygiene Clinic to this University has been increasing. Formerly, its inclusion in the medical picture was viewed with skepticism by many. There was a feeling that students

would fear the stigma of openly consulting a psychiatrist. In fact, this point of view was reflected by the medical administration with the result that the psychiatrist was burdened with routine duties of medical advising which prevented him from meeting the demands in his own field. Following reorganization of this department, the duties of the psychiatrist were limited to the field of mental hygiene. His efforts were restricted to therapy and teaching. Because of the large demand for therapy last year, it was found necessary to eliminate the mental hygiene classes during the winter term. All teaching in mental hygiene is consolidated in the summer session. That former attitudes regarding psychiatry no longer exist are indicated by the fact that both the staff and students accept this clinic. It is not uncommon now for a student to enter the Clinic and ask the clerk at the desk if he may see a psychiatrist; neither is it uncommon for University faculty members to refer students directly to the psychiatrist. This year there has been a large increase in the number of patients seen by direct request, referrals from faculty members, and referrals from the medical staff. Statistically, there were 200 patients—141 of these were men and 59 were women. Of this total figure, 48 cases had been seen in previous years, and the remaining 152 were seen this year at the clinic for the first time. Of this group, 70 were veterans. Twenty-five individuals were emotionally ill to the degree that leaves of absence were granted. This compares with eleven leaves of absence for the same purpose last year—a rather astounding increase. Another figure that has practically doubled is the number of major psychoses. There were eleven this year requiring withdrawal from the University. The remainder of the twenty-five were for severe psychoneuroses; and of this group there were three suicide attempts, none of which was successful. Based on the belief that better recognition of emotionally maladjusted students in the counseling office would allow the psychiatrist much earlier entrance into the case, last year a psychiatric social worker was recommended for a joint appointment in the Counseling Office and the Department of Clinical and Preventive Medicine. This past year the psychiatrist has endeavored to strengthen and improve the relationship of the Counseling Office and this Department by holding seminars for the counselors, their assistants, and the psychiatric social worker. These seminars were discussions centered around one or two current cases and have proved valuable in promoting mutual understanding. The liaison work of the psychiatric social worker has been of distinct benefit to the two offices. In many cases, she has made the original interview and has helped to organize the information necessary in the treatment of these patients. Because the volume of psychiatric consultations has increased materially in the last two years, there has developed a need for an assistant psychiatrist. Fortunately, next year there will be on campus a qualified psychiatrist who will assist in the School of Industrial and Labor Relations on a half-time basis. This psychiatrist has been scheduled to contribute one half his time to the mental hygiene clinic.

Each year the value of the Allergy Clinic becomes more evident. It has served a large number of students who would have had difficulty in remaining in college without the assistance they received here. The medical service in the hospital has had a sharp reduction in admissions for severe allergic conditions since the organization of this clinic under a specialist on the full time staff of this department.

During the past year considerable progress has been made towards the realization of a practical Endocrine Clinic. More and more interest in the assay of hormone levels by direct and indirect procedures is being shown. Eventually this will result in requests for assistance from the Department of Biochemistry.

In previous reports, the success of the Nutrition Consultation Service has been emphasized. Many interesting and valuable techniques and relationships, with medical and non-medical personnel, have been worked out. The Diet Table, which is a combination venture of the College of Home Economics, the School of Nutrition, and this department, is supervised by the medical nutritionist, who has a dual appointment in the School of Nutrition and this department.

The "Cold" Clinic is operated with non-medical personnel. Its success has been demonstrated each year since 1942. No patient who has fever or complains of feeling ill is treated without first obtaining medical inspection and prescription. This clinic isolates those patients with acute coryza symptoms from other patients in the clinic. It also, because of numbers involved, prevents deterioration in physician interest in the general medical clinic.

This year a new specialty clinic was organized. By authority of the Board on Student Health and Hygiene an Eye Refraction Clinic was established. With the co-operation of a consulting ophthalmologist, eye refraction service is now available at the clinic for an extra fee. With the discount obtained for glasses, this service provides the student a substantial savings.

The physiotherapy department at the Clinic had previously been directed by a part-time physiotherapist. This year it seemed desirable to employ him full time. The convenience to patients and improvement in clinical results have more than justified the expense involved. Because he has been available all day, he has given nearly seven hundred treatments to athletes who, in the opinion of the athletic physician, required two treatments daily, but could obtain but one each day by the trainers at Schoellkopf. Altogether, 5,058 treatments were given.

The credit for the high level of operating efficiency at the clinic does not belong exclusively to the medical personnel. The able assistance of the nursing and clerical staff in the many activities there contributed much to its smooth function.

Infirmary

The Infirmary is an approved hospital of the American College of Surgeons. Inspection by a representative of that group this year resulted in the recommendation that the Clinic and Infirmary be consolidated into one unit as soon as possible for the purpose of providing a modern, convenient plant with minimum of reduplication.

Bed space in the present hospital building was expanded to meet the increased registration of the University last year. This year a sprinkler system to the fourth floor wards of the main hospital and to the nurses' home was completed, insuring the sprinkling, should the need arise, of all areas of the hospital not fire resistant. Fortunately, maintenance expenditures this year were within budget provisions; however, the ordinary day to day maintenance costs having risen several fold, make savings in this area important items.

In spite of high operating costs, the several departments at the Infirmary maintained high standards. The nursing service was adequate. The first full year of experience with the new nurse salary scale was completed. The nursing costs were more than double any previous year in the Infirmary's history. The X-ray Department and the Clinical Laboratory were active. Fortunately, ample qualified technical assistants were available for each of these departments. The resident program, now a joint venture with Memorial Hospital, added much to the attending physicians' interest, although there continues to be staff members who hesitate to assist in this valuable undertaking. The clinical library has reached the size and importance in the Cornell medical organization that it no longer can function by a staff committee. It is proposed to make the medical record librarian responsible for the general library. This will involve a physical change in the library as well as increased budget expense for the technical assistance.

There was one death at the Infirmary this year. An undergraduate was suddenly stricken with subarachnoid bleeding from a ruptured aneurism of an anterior cerebral artery. The hemorrhage was fatal in a few hours. Autopsy findings confirmed the diagnosis.

STATISTICS FOR THE YEAR

Medical Clinic out-patient visits.....	45,664
Infirmary out-patient visits.....	1,136
Total out-patient visits.....	46,800
<i>Infirmary</i>	
Medical Patients Discharged.....	1,409
Communicable Disease.....	41
Other than Communicable Disease.....	1,368
Number of Consultations.....	50
Deaths.....	1

Surgical Patients Discharged.....	292
Major Operations.....	38
Minor Operations.....	225
Fractures requiring reduction and casts.....	38
Consultations.....	82
Deaths.....	0
Laboratory	
Clinical pathology examinations made.....	13,898
X-ray	
Examinations of the chest (4x5).....	2,420
Examinations of the chest (14x17).....	2,280
Examinations other than chest.....	1,883

ENTRANCE EXAMINATIONS AND PUBLIC HEALTH

This year 2,764 entering and transfer students were examined. The Broome County mobile photo-Roentgen unit was again used for chest x-rays. This unit, placed at the end of the examination line, expedited considerably the taking of chest x-rays. Only five students who missed the scheduled x-ray examination failed to report for later x-ray. These have been reported to the Registrar's Office. The tetanus toxoid program at the University continues. At present, 97.8% of enrolled students are considered immune through tetanus toxoid immunization.

The water supply of the University has been satisfactory throughout the year. A high residue of chlorine is found frequently in treated water and has been responsible for the chlorine taste often experienced in University water. The concentration of chlorine in the drinking water has been found so high at times that when it was used in the Old Armory swimming pool, the water required dechlorination to prevent irritation to the eyes of bathers. At other times, the chlorine concentration in the drinking water supply has made unnecessary the addition of chlorine from the chlorinator at the swimming pool.

In general, sanitation in the dining halls has been satisfactory. However, careless practices in connection with refrigeration of milk pending its use at the cafeterias have been noted on inspection by the Health Department. There appears to have been an increased tendency to store milk in cases at the rear of the serving counters pending its placement on chill trays or in refrigerated storage cabinets. The two alternatives which have been recommended to eliminate this questionable practice are: increased refrigeration facilities or modification of operational procedures.

During the year an annoying condition of long standing was corrected. The surface stream flowing in the vicinity of the new Administration Building was found to contain sewage. This stream normally should receive only storm water. A sanitary sewer was found to have been connected into the storm water collecting system. Removal of the sanitary sewer connection from the storm water system corrected this condition.

RESEARCH

Elsewhere in this report some of the responsibilities of this department to other departments of the University are mentioned. Such obligations are particularly true in the case of research. While a considerable amount of clinical research is conducted by members of this department, facilities are not available for other than clinical research without joining forces with other departments. This year the School of Nutrition received State aid for its teaching and research programs. Many parts of these programs need medical collaboration. For specific projects the coalition of facilities and personnel of this department with the School of Nutrition is mutually advantageous. A closer working arrangement between these two groups seems assured, since definite arrangements have been made for medical personnel to be stationed in the School of Nutrition. In this department, work continues on the long term study of the relation of developmental defects in the breast to cancer in later life. During the year, patients occupied research beds at the Infirmary where a study of new anti-anemic metabolites was started. A contract with the government for reconsideration of metabolic data from research conducted here in wartime was completed. A resident physician's project on liver function in mononucleosis was

completed and the manuscript prepared for publication. Clinical research in endocrine disorders in young women is attracting considerable local attention. It is hoped that all members of the medical staff of this department will participate in research as opportunity develops. So long as no certification for a specialist in student health work is given by a certifying board in medicine, it seems desirable that all physicians who have no certification become skilled in an area of medicine so that they will have future freedom and security. Such advantages can be attained through research opportunity in this department.

INSTRUCTION

The training of resident physicians continues to be the most active educational effort of this department. We have had one and one-half years experience in this joint medical endeavor with the medical staff of Memorial Hospital. Because there is no certification for student health training in this country, it seems logical to plan for certification of trainees here in internal medicine. Cornell University is a member institution of the American Student Health Association. In May, 1948, Cornell's representative called to the attention of that Association the fact that lack of recognition of student health as a medical specialty was preventing many young medical men from considering student health work for a career. Further exploration of the attitudes of a number of student health services in the country forced the conclusion that few institutions were concerned with developing physicians in the area of student health. At Cornell the policy remains firm to train men in internal medicine with emphasis on student health.

Formal instruction in the department was offered in Medical Nutrition and X-ray Technique for Veterinary seniors. No courses in health education were given. Courses in Mental hygiene are now offered only in the summer session. Plans are under way to initiate a graduate course in Public Health Nutrition next year. This undertaking will be the dual responsibility of the School of Nutrition and this department. Working with personnel of the County Health Department under the direct supervision of a faculty nutritionist, the course will offer excellent opportunity to become acquainted with interviewing and field investigative techniques. The association of nutrition students with medical people early in their training should be of distinct educational advantage to those who follow careers in medical nutrition.

COMMUNITY MEDICAL DEVELOPMENTS

Last year in the report of this department, an account of the relationship of the University Medical Department with community medicine was reported. Because the Department of Clinical and Preventive Medicine has a closer relationship with Ithaca medicine than other divisions of the University, it seems appropriate to again incorporate in this report medical developments occurring during the year which might lead to a closer medical relationship between Cornell and the community. Last year the alternative recommendations of a citizens action committee were reported. This committee had representatives from Cornell, Memorial Hospital, the City of Ithaca, and the County of Tompkins. There have been no deliberations of that committee reported during the year. However, difficulties in financing Memorial Hospital together with the recommendation of the Joint Hospital Survey Board of the State of New York resulted in the supervisors of Tompkins County taking over the operation and management of Memorial Hospital on January 1, 1948. So long as Tompkins County remains under 50,000 population, substantial reimbursement of deficits by the State will be forthcoming to the hospital. While there is room for speculation as to whether this move by the Board of Supervisors of Tompkins County is a step in the development of a community medical center, it appears inappropriate to report here more than the change of management and method of financial support of Memorial Hospital. It is most satisfying to include that the new status of Memorial Hospital did not change the relationship which Cornell enjoyed with that institution. In February of 1947, the resident program of the Cornell Infirmary and Clinic was extended to the medical side of Memorial Hospital. This residency has been the medium through which the professional group of both the Cornell Infirmary and the Memorial Hospital could unite for

the accomplishment of a worthy objective. It was originally certified as a mixed residency. Application for certification of the residency for internal medicine is now pending. The latter application was made on the recommendation of a representative of the American Board of Internal Medicine.

SUMMARY

In this report, a brief summary of the operation of this department for the year is given. In these times of rising costs, the Department of Clinical and Preventive Medicine operated the Clinic and Infirmary within its budget. With new emphasis on collaborative research, with better prospects for cooperative staff educational programs with Memorial Hospital, with new formulas for health education instruction, and with a bright outlook for participation in a strong County Health Department, this department should go forward with its objectives of good clinical medicine for students, appropriate and effective health education, sound public health for the entire university, and continued progress in research.

NORMAN S. MOORE, Chairman,
Department of Clinical and Preventive Medicine.

APPENDIX XXIV

REPORT OF THE DIRECTOR OF ADMISSIONS

To the President of the University:

SIR: I have the honor to present the report of the Director of Admissions for the year 1947-1948. Such a report involves two distinct activities—the work done by the Office of Admissions during the reporting year, July to June, and the results of the work of the *previous* year in terms of actual admissions.

The whole process of gaining college admission, and of selecting candidates, has moved forward in timing so that it is rarely possible these days to initiate an application as late as June and expect to gain admission to any college that same fall. By June, selections have been made. At Cornell it has been necessary, in order to properly service the applications of the large group applying and to reach decisions in a reasonable time, to set deadlines as early as March first and April first after which no further candidates could apply. Thus, the bulk of the work done in the year 1947-1948 had to do with those seeking admission in the fall of 1948. Except for the statistical tables, then, this report actually treats, in the main, with the work leading up to the admission of the class entering in September, 1948.

Last year's report noted the revival on a small scale of our contacts with secondary schools and of the work of our alumni secondary school committees. This important work has been further expanded in several ways. Members of the staff of the Admissions Office or faculty representatives have visited schools in sixteen states, and secondary school parties under the auspices of alumni secondary school committees have been held in each of the same states. Through the cooperation of the Alumni Office, the Director or the Assistant Director of Admissions has appeared at some twenty-three Cornell Alumni Club meetings in fifteen different states.

An important development in secondary school relations was the first annual conference at Cornell of a selected group of secondary school headmasters and principals, held early in the fall of 1947. This conference, called to discuss admissions problems, has already borne fruit in the way of new understanding and appreciation of Cornell by those who attended.

The staff of the Admissions Office will never be able to travel as extensively as desired by our alumni or by secondary schools, nor can we entertain all those principals and headmasters whom we would like to have visit Ithaca. The backbone of our secondary school work will always be that sizeable group of alumni secondary school committeemen who give extensively of their time and enthusiasm to nurture Cornell's contacts with schools, and to seek out and help those young people who should know about Cornell and what it has to offer them in the way of college educa-

tion. These invaluable alumni workers have been under the leadership of Edward H. Carman, Jr., '16. Robert W. Storandt, '40, Assistant Director of Admissions, has served as executive secretary of the Committee. Through his publication of a monthly letter to two hundred seventy-one committeemen, that group has been kept currently informed concerning Cornell and all matters related to the admissions process.

A tangible result of all this has been a deeper insight into the problem of admissions by our own alumni and by the candidates themselves. With applications still near the peak, there has been a noticeable decrease in the amount of difficulty experienced in dealing with rejected applicants.

The work of processing applications has been further refined to aid the several selection committees and to stimulate prompt decisions in every way. It has been particularly encouraging to have the selection work of the College of Engineering centralized under one person. Faster and more consistent selection has resulted. Unfortunately, the selection work in general is not yet proceeding at a satisfactory rate. Cornell does send out many notifications of action to candidates early in the spring. But Cornell also announces far too many decisions after the first of June. It is hoped that another year will see improvement in this regard.

An important intercollegiate agreement affecting admissions was entered into by the eight so-called Ivy League Colleges. Under the terms of this agreement, no candidate notified of the award of a scholarship or of admission need accept until June fifteenth. The purpose of this agreement is to remove pressure from the candidate, making it possible for him to consider the several opportunities which may be available to him. There has been a tendency among a number of institutions to make early offers of admission, acceptance of which must be made within a short period, involving non-refundable deposits of some size. Since the Ivy League agreement was signed early in the spring of 1948, some twelve other institutions have become parties to the agreement.

One cannot review the year's work in Admissions without pointing out the seriousness of the problem resulting from the present system of awarding Cornell State Tuition Scholarships by the New York State Department of Education. These one hundred and fifty awards constitute a fair proportion of the total admissions to the Colleges of Arts and Sciences, Engineering, and Architecture. As our normal selection period is virtually over by June first, it has been necessary to save places for that many students until the announcement of the awards in late August. Since each division of the University has just so much room for new students, the uncertainties connected with the late inclusion of one hundred and fifty freshmen who may be architects, engineers, or liberal arts students of either sex has made it impossible to select the correct number of students during the spring admissions period. This matter, with its many other ramifications, has been brought to the attention of the Department of Education, with the suggestion that this program be so arranged as to make possible announcement of awards not later than June first each year. It is most heartening to report complete willingness on the part of those administering the State Scholarship program to study the matter with the objective of effecting the change, if at all possible.

In addition to its normal functions, the Office of Admissions has been responsible for the administration of the National Scholarship program, distributing the necessary information to schools and candidates. Some seven hundred applications were received, from which the winners were selected. Experience with this program, as well as with the constant questions coming to the office concerning scholarship aid of all kinds, has led to the conviction that intelligent administration of Cornell's various scholarship programs requires a central scholarship office. As a start in that direction, and with the full cooperation of the John McMullen Scholarship Committee of the College of Engineering, the National Scholarship and McMullen Scholarship programs have been closely integrated. Discussions are under way which, it is hoped, will lead further in the direction of centralization of administrative detail and publicity concerning all scholarships available to entering students.

The Office of Admissions is particularly conscious of the very considerable number of candidates accepted for admission who do not matriculate because of their inability to meet college expenses. In this group are many of the most promising applicants. Additional scholarships, available to entering freshmen, are needed if Cornell is to get her share of these outstanding candidates.

Statistical information concerning the volume of applications and admissions is contained in the tables which follow. Table III shows clearly the changes in the admissions picture over the last eight years, and it will be noted that the number of applicants for admission in 1947-1948 was at an all time high. Even so, it was possible to admit a somewhat larger percentage of those who applied, due to graduation of a large class the previous spring.

HERBERT H. WILLIAMS,
Director of Admissions.

TABLE I—A
APPLICATIONS FOR ADMISSION FROM SECONDARY SCHOOLS

	Fall 1947		Spring 1948		Total	
	Applied	Admitted	Applied	Admitted	Applied	Admitted
Agriculture						
Men.....	1365	296	83	24	1448	320
Women.....	133	34	10	5	143	39
Architecture						
Men.....	322	22	17	2	339	24
Women.....	67	10	1	0	68	10
Arts and Sciences						
Men.....	2509	361	216	30	2725	391
Women.....	1369	153	70	11	1439	164
Engineering						
Men.....	2409	384	212	78	2621	462
Women.....	41	7	0	0	41	7
Home Economics						
Women.....	512	138	6	1	518	139
Hotel Administration						
Men.....	443	53	80	19	523	72
Women.....	28	5	2	1	30	6
Industrial and Labor Relations						
Men.....	128	27	58	13	186	40
Women.....	24	5	3	1	27	6
Total						
Men.....	7176	1143	666	166	7842	1309
Women.....	2174	352	92	19	2266	371
GRAND TOTAL.....	9350	1495	758	185	10108	1680

TABLE I—B
APPLICATIONS FOR ADMISSION FROM OTHER HIGHER INSTITUTIONS

Agriculture						
Men.....	346	56	106	21	452	77
Women.....	33	7	4	0	37	7
Architecture						
Men.....	247	17	5	0	252	17
Women.....	23	2	0	0	23	2
Arts and Sciences						
Men.....	1023	97	57	10	1080	107
Women.....	341	18	22	4	363	22
Engineering						
Men.....	1105	75	29	2	1134	77
Women.....	7	1	0	0	7	1
Home Economics						
Women.....	136	17	5	0	141	17
Hotel Administration						
Men.....	272	27	66	16	338	43
Women.....	15	3	5	0	20	3
Industrial and Labor Relations						
Men.....	130	20	3	1	133	21
Women.....	12	2	0	0	12	2
Veterinary Medicine						
Men.....	617	21	0	0	617	21
Women.....	27	0	0	0	27	0
Total						
Men.....	3740	313	266	50	4006	363
Women.....	594	50	36	4	630	54
GRAND TOTAL.....	4334	363	302	54	4636	417

TABLE II
SUMMARY FOR FALL TERM 1947 AND SPRING TERM 1948

Men.....	10,916	1456	932	216	11,848	1672
Women.....	2,768	402	128	23	2,896	425
TOTAL.....	13,684	1858	1060	239	14,744	2097

TABLE III
APPLICATIONS AND ADMISSIONS IN LAST EIGHT YEARS

	From Secondary Schools		From Higher Institutions	
	Applied	Admitted	Applied	Admitted
1947-1948.....	10108	1680-17%	4636	417-9%
1946-1947.....	9424	1419-15%	4720	384-8%
1945-1946.....	5282	1512-29%	2296	612-27%
1944-1945.....	3329	1304-39%	857	265-31%
1943-1944.....	3312	1226-37%	704	222-32%
1942-1943.....	3402	1562-46%	607	219-36%
1941-1942.....	3812	1672-44%	977	228-23%
1940-1941.....	3788	1603-42%	1085	201-19%

APPENDIX XXV

REPORT OF THE COUNSELORS OF STUDENTS

To the President of the University:

SIR: We have the honor to present the report of the Counselors of Students, for the year 1947-1948.

This office, committed to a policy of cooperation, has continued to develop and maintain communications with colleges and other agencies concerned with student life. Particularly with the College of Arts and Sciences, the vocational and personal counseling program has been carried on very satisfactorily during the past year. Tentative techniques and procedures have been arranged cooperatively with most of the other schools and colleges on the campus to improve the counseling and welfare of the students.

Through arrangement with the appropriate office of the various schools and colleges, every student leaving the University through a leave of absence, withdrawal, or honorable dismissal, is asked to have an exit interview. Through these interviews it has been possible in many cases to help students remain in the University, or through interest and aptitude testing to give the student a more realistic approach to his problem so that he will be better fitted to continue his training in whatever field seems indicated and leave Cornell in a constructive frame of mind.

Our aim during the past year has been to develop mutual understanding and respect among the various agencies working with students. Cooperative relationships between this office and other offices of the campus have been one of the important steps in this overall program.

COUNSELING INTERVIEWS

During the past year the Counselors of Students and their staff members have had approximately 9,458 interviews and counseling situations as follows:

Adjustments in areas of academic interests, social activities, study habits, and human relations.....	3516
Vocational Interest and Aptitude Testing and Counseling.....	461
Fraternity Problems arising with Members, Advisers, and Alumni.....	252
Scholarships and Student Aid.....	659
Physical Training Excuses.....	51
Prospective Student Proctors.....	37
Conferences with Student Deans.....	468
Special Permissions for Women's Off-Campus Residence.....	15
Leaves of Absence Excuses (Where student represents Cornell University at intercollegiate affairs).....	92
Prospective Entering Students.....	92
Students desiring transfer within the University.....	80
Students leaving the University.....	383

Service to other University Departments and Committees (personal data, counseling by referral, etc.):

Proctor.....	83
Director of Admissions of University and various Schools and Colleges..	224
Residential Halls Office.....	122
Advisers and Instructors (students' scholastic difficulties).....	320
C. U. R. W. (Staff).....	93
Willard Straight (director, assistants, and secretaries).....	75
President of Student Council, Committee on Student Activities, W. S. G. A. Officers, and other Student Group and Committee Representatives.....	385
Parents.....	85
Interviews with Medical Implications.....	448
Foreign Student Counseling.....	1500

There were 178 cases of vocational counseling with non-veteran men. In each of these cases a preliminary interview was held during which time efforts were made to ascertain and discuss the problem, and, if testing seemed indicated, a suitable program was set up with referral to the Testing Bureau. Subsequent to testing, the student returned to his counselor for an interpretation of the test scores and further discussion of their implications as they might affect the future program of the student. In each case a complete counseling write-up was made, a copy forwarded to the student's academic adviser, to the Testing Bureau, and a copy kept in our file. Copies in 54 particular cases were forwarded to University personnel connected with transfer of students, to help them appraise the interests and aptitudes of petitioning students. Also, 14 of these write-ups were made available to Directors of Admissions of other colleges and universities in furthering applications for transfer.

283 Interest Tests were given to women students with individual interpretive appointments. 52 women had additional testing which seemed indicated. Complete records are kept of interviews. Copies of these reports are also sent to the student's adviser.

Through cooperation with the W. S. G. A. Vocational Information Committee four career days were arranged with notables in particular fields. Individual interviewing and informative discussions on personnel and guidance, language opportunities, social service, and journalism answered many questions. These programs were followed by panel discussions on "Job Getting Techniques."

A vocational information library has been expanded during this past year in the Conference Room of the Office of the Counselors of Students. Students may read here information on almost any vocation in which they are interested.

Further use of the Conference Room should be noted in that there was a total of 320 reservations listed for the year, averaging two each day. It was scheduled for individual appointments with visiting speakers, with representatives from different industries, for Counselors' Staff meetings, for meetings with personnel representa-

tives from C. U. R. W., medical department, and Bureau of Educational Research and Service. The Campus Chest Committee, Panhellenic Council, Student Council committees, and scholarship committees also used the Room. Staff members acted as advisers to these groups.

For the first time the counseling staff has had a personal interview with each entering freshman woman on campus. These appointments were intended to acquaint women with the services of our offices and to help with their orientation and well-being at Cornell.

In connection with counseling and orientation, last fall this office developed a questionnaire which was sent to all men in the freshmen class. Results were tabulated and the following types of students were called to the office for interview and counseling:

- 124 whose study schedules had not been satisfactorily worked out
- 40 whose financial arrangements for the first year seemed insecure
- 75 who indicated they were not making the friends and acquaintances they had hoped to make at Cornell

174 of those who responded they were overloaded or discouraged in some way. This approach to counseling and orienting freshmen to Cornell is felt to be the most practicable and advantageous method of interviewing new students and uncovering problems before they become acute. It has demonstrated its value to us and it is felt that it should be included in our program next school year.

During the past year monthly meetings of members of the staff actually engaged in and responsible for personal counseling were held with a member of the medical staff to discuss the case history approach to help resolve cases of emotional and psychological disturbances.

The newly developed records branch for men, explained in our last report, has been very valuable. We have made extensive use of it in many counseling situations and it has proved its worth as a central reference for all departments of the University.

FACULTY COMMITTEES IN WHICH THE COUNSELORS OF STUDENTS PARTICIPATE

A. Faculty Committee on Student Activities, executive secretary.

The Committee met eleven times during the year. The secretary keeps the members of the Committee informed of the organizations operating on the campus, and arranges all details for the recognition of new groups through the Student Council. Four students suggested by the Student Council are appointed as members of this Faculty Committee who meet regularly with it. Excuses for students representing the University in official off-campus affairs are recommended to the various colleges by the executive secretary.

B. Committee on Student Aid, executive secretary.

There have been twelve meetings of this Committee. In preparation for each meeting, applicants are interviewed, an agenda is prepared, and scholarship information circulated to each committee member. Minutes of the meeting are prepared and distributed, and letters are sent to students concerned, with copies going to the Treasurer for confirmation. 138 applications for financial aid were reviewed by this Committee. Twelve Albert C. Murphy Scholarship applications were processed and reviewed by the Committee. Two awards were made.

C. Faculty Committee on Undergraduate Scholarships.

Five meetings of this Committee were held during the year. Duplicate proceedings to those mentioned for the Committee on Student Aid were accomplished for the Faculty Committee on Undergraduate Scholarships. In addition application folders were critically reviewed for financial need and a list was prepared to help select Lefevre and Undergraduate Scholarships winners. Letters were written to the recipients of the Lefevre and Undergraduate Scholarships as well as to those who did not qualify. 74 scholarship applications were reviewed by the Committee in addition to the Lefevre and Undergraduate Scholarships.

D. Special Scholarship Work.

In addition to the previously mentioned scholarship activities, this office has been responsible for correspondence with the Teagle Foundation in New York City. Forty applications were processed, and fifteen awards were made.

PRESIDENT'S REPORT

The Counselor of Students acted as Chairman of two fraternity committees which awarded scholarships to outstanding men in those fraternities.

E. Special Scholarship Committee appointed by the President, chairman.

The Counselor of Students acted as Chairman of this Special Scholarship Committee appointed by the President, and the Assistant Counselor of Students acted as Secretary. The purpose of the Committee was to examine the overall scholarship program and policies of the University. The Committee held five meetings to accomplish its task. In connection with these meetings statistical charts showing the overall University scholarship and grant-in-aid program were prepared for consideration of the members. Minutes of each meeting were made, distributed and final recommendations compiled for presentation to the President.

F. Members of University Medical Staff.

There have been approximately thirty cases of cooperative effort between our office and the Medical Staff in helping to resolve students' difficulties.

G. Greater Cornell Committee.

H. Freshman Camp Policy Committee.

I. Executive Committee of the Cosmopolitan Club.

J. National Scholarship Committee.

K. University Housing Committee.

L. Committee on Scheduling of Public Events.

In this connection meetings were held and a tentative calendar of events was prepared and distributed to interested departments.

M. Board of Governors of Cornell University New York Hospital School of Nursing.

N. Consulted with and advised Student Council members on Student Activities Budget.

O. Teaching in the graduate division of the School of Education and conducting a student dean course which prepares people for student personnel administration through actual experience and theoretical study.

PARTICIPATION IN CAMPUS ACTIVITIES AND ORGANIZATIONS

A. Advisers to: Independent Council, Student Council, Interfraternity Council, W. S. G. A. (worked closely with their social program in the dormitories, endeavoring to set up adequate social experience for all students at Cornell), Mortar Board, Panhellenic Council.

B. Adviser to the Student Council Desk Book Committee.

C. Member of the Advisory Committee for the Student Council Student Opinion Poll Committee.

D. Member of C. U. R. W. Board of Control.

E. Assisted with discussion periods during Religious Emphasis Week for C. U. R. W.

F. Student Leadership Conference.

G. Freshman Camp.

H. Campus Chest Drive.

I. Willard Straight Board of Governors.

J. Board of Trustees (Cayuga Lodge and Algonquin Lodge).

K. Orientation Program—new students.

PROFESSIONAL AND COMMUNITY OBLIGATIONS ACCEPTED BY THE COUNSELORS OF STUDENTS AND THEIR STAFF

A. National Association of Deans of Women—secretary of committee.

B. National Association of Deans and Advisers of Men—committee chairman.

C. New York State Association of Deans of Women.

D. American Council on Education—consultant in guidance and personnel.

E. Hazen Foundation Eastern Conference on Student Counseling—chairman of conference.

F. Woman's Foundation—Board of Directors.

G. National White House Conference on the Family—delegate.

H. Occasional Visiting Lecturer at Teachers College, Columbia University.

I. Ithaca Camp Fire Girls—Board of Directors.

- J. Discussion leader at Cornell Women's Clubs of Long Island, Elmira, and Ithaca, and at Alumni Clubs in Buffalo, Bethlehem, Rochester, Houston, Toledo, St. Louis, Trenton, New Haven, Boston, Springfield, Hartford, and Staten Island.
- K. Interfraternity Conference.
- L. Spoke at 4-H Club meeting in Dryden, New York, to the College Club of Auburn, New York, and to the meeting of the New York State Nursing Association, District No. 3.
- M. Conference of Scholarship Officers of Ivy League Colleges.
- N. Appointed liaison officer for United States Air Force.

THE COUNSELORS OF STUDENTS SPONSORED THE FOLLOWING CONFERENCES DURING
THE PAST YEAR

- A. In cooperation with Panhellenic Council, a conference of national officers of sororities was held at which sorority problems, both local and national, were discussed. The Counselor of Students had an opportunity to have personal contact with the participants of the conference which was of significant importance in later relationships between individual sororities, college and city Panhellenic councils, and national offices.
- B. W. S. G. A. was hostess for the Eastern Convention of the Association of Women Students. The Deans of Women of the visiting schools attended this convention and were entertained by the Counselor of Students and the staff.

COUNSELING OF FOREIGN STUDENTS

The enrollment of foreign students during the academic year was 313 from 45 countries. Graduate students formed 65% of the total. There were 260 men and 53 women. Of the total, 172 were registered in the University the previous year and 141 (45%) were new students.

The distribution by major geographical areas is shown in the following table:

Europe (except England).....	33
Near East.....	22
Far East.....	124
British Commonwealth.....	93
Latin America.....	41

313

During the year there have been an unusual number of problems of all kinds—personal, academic, financial, housing, immigration, social, health, etc.

In addition to personal counseling, much time has been devoted to student groups primarily concerned with foreign students such as the Chinese Students Club, Hindustan Association, One World Club, Moslem Student Association, and the Cosmopolitan Club. Close cooperation has also been maintained with Willard Straight Hall, Cornell United Religious Work, and other campus organizations.

Last October C. U. R. W. with the help of the Foreign Student Counselor held a much needed week-end orientation camp for new foreign students. Out of it grew the One World Club which functioned throughout the year. Another development was a Committee on Hospitality to Foreign Students. Through the efforts of the Committee formulated by the Campus Club every foreign student in the University was invited to an American home at least once during the year.

The Counselor to Foreign Students, attached part time to the Admissions Office, has handled all the correspondence concerning admissions from outside continental United States and has unofficially performed this service in the Graduate School. He is frequently consulted by the admissions officials in the various colleges and departments.

The enrollment of foreign students has increased each year. How they are to be accommodated and financed is an unanswered question. Over a thousand have written Cornell during the past year in the hope of entering the University in September 1948. It would be desirable, in view of the desperate financial situation in many countries, if our foreign student scholarships could be increased in number.

SOCIAL ADVISING

The growth in registered social affairs seems as if students had just about attained the peak number of events. By a study of our figures, it is seen that 94 more parties were registered this year than in last year, whereas the increase in parties from 1945-1946 to 1946-1947 was 507. A total of 1,561 events were registered this year. As a whole, affairs tended toward being small and informal. Contrary to traditional expectation, the fraternity houseparty weekends show: Fall, 83; Junior, 60; Spring, 65 parties. One football weekend had 80 registered events. The peak registration was the week before Christmas vacation with 101 parties.

The social Committee under W. S. G. A. made up of representatives from each of the women's living units did a constructive piece of work in planning and carrying out a varied program in the women's dormitories. This committee worked in close contact with this office in planning events which included: formal and informal dances, receptions, openhouses, teas, and coffee hours. Election of next year's social committee was held this spring for the first time. This was helpful in that the old committee had an opportunity to work with the new committee and with this office in the overall planning of dormitory events for 1948-1949.

This office gladly helps any fraternity, sorority, and student organization in any phase of its social program and is interested in seeing worthwhile programs being carried out.

A calendar of all-campus social events is maintained. Last fall copies were available to students and interested offices on campus to assist with their plans throughout the year. Last spring a tentative social calendar for 1948-1949 was compiled and released to guide students in planning activities for next fall.

PUBLICATIONS

The Counselors of Students supervised the publication and compilation of the data in connection with the following:

A. Desk Book.

It was the responsibility this past year of this office to supervise the compilation of information for the Cornell Freshman Desk Book which was distributed by mail to all new students. Much of our staff time went into its preparation during the summer.

The Freshman Desk Book Committee appointed this year by the Student Council, was given responsibility for financing, publishing and distributing of the Cornell Freshman Desk Book. This office acts as adviser to the Desk Book Staff.

B. Head Residents Manual—published monthly.

C. Weekly Social Calendar of approved social and civic events.

D. Orientation Program.

This office cooperates in the development of the Freshman Orientation Program.

E. New Scholarship and Financial Aid Pamphlet.

This office took over the development of a new scholarship pamphlet and supervised the revision so that the booklet would be of greater value to students now in the University, students who plan to enter the University, and to Cornell alumni in the field who are working in any way with the scholarship program.

F. Freshman Orientation Pamphlet.

This office, in cooperation with the various University groups interested in the orientation of freshmen, compiled and printed the Orientation Pamphlet which was distributed to all entering students.

G. Cayuga Lake Safety Precautions.

This office revised the poster advising students of safety precautions when boating or swimming in Cayuga Lake. Distribution was made to all schools and colleges on the campus, and to various strategic points in Ithaca.

H. List of Students.

This office compiled and distributed a list of all incoming students in the Fall of 1947 for office records, fraternity rushing purposes, and for the use of C. U. R. W. The list included Ithaca addresses and telephone numbers.

I. Revision of the loan and the student aid application forms.

HOUSING

With adequate housing, there has been a marked increase in student responsibility for maintaining social and civic standards. The morale has been high. The Head Residents, W. S. G. A., and individuals report a good year. The graduate women have repeatedly expressed appreciation for the cottages they have occupied.

See tables for distribution of women students by colleges and by housing.

DISTRIBUTION OF WOMEN STUDENTS BY HOUSING OFFICE OF COUNSELOR OF STUDENTS
SPRING TERM—1948

<i>Houses</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>Terms</i>				<i>8</i>	<i>Total Under-Graduates</i>	<i>Specials</i>	<i>Graduates</i>	<i>Total</i>
				<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>					
Balch.....	32	3	9	3	88	7	173	315	..	2	317	
Cascadilla.....	..	..	3	6	103	3	12	127	..	1	128
Clara Dickson.....	4	294	5	43	4	50	3	11	414	1	4	419
Comstock.....	..	..	3	41	3	25	1	2	75	..	75
Risley.....	3	5	138	8	21	..	8	183	3	2	188	
1 The Circle.....	..	1	..	..	..	..	..	1	..	10	11
2 The Circle.....	..	..	..	..	8	..	4	12	..	1	13
3 The Circle.....	..	..	..	..	..	..	1	1	..	6	7
302 Wait Avenue.....	..	..	..	..	1	1	1	3	1	9	13
613 Thurston Avenue..	..	..	..	..	1	..	2	3	..	5	8
<hr/>												
Total Campus Housing.....	4	329	17	234	24	297	15	214	1134	5	40	1179
Sororities.....	..	4	57	2	64	4	155	286	..	2	288	
At Home.....	9	..	17	..	12	5	12	55	2	8	65	
With Husband.....	1	..	5	2	11	3	29	51	13	32	96	
With Relatives.....	..	..	..	..	..	2	2	2	..	1	3
Room and Board.....	2	1	..	..	2	..	3	8	1	..	9
Special Permission.....	..	..	1	1	2	..	5	9	..	..	9
Commuting.....	1	1	1	..	7	..	3	13	1	6	20	
Approved Apartment..	..	..	..	..	..	2	2	2	4	50	56
Approved Room.....	..	..	5	1	5	1	4	16	7	78	101
M. V. R. Apartment..	..	..	..	..	..	1	..	5	6	1	7
Non-Resident.....	..	..	..	..	..	..	13	13	..	..	13
<hr/>												
Totals.....	4	342	23	320	30	401	28	447	1595	33	218	1846

DISTRIBUTION OF WOMEN STUDENTS BY COLLEGES OFFICE OF COUNSELOR OF STUDENTS
SPRING TERM—1948

College	Terms								Total Under-Graduates	Specials	Graduates	Total
	1	2	3	4	5	6	7	8				
Agriculture.....	34	5	26	5	34	4	50	158	16	..	174	
Architecture.....	7	..	5	1	10	4	6	33	3	..	36	
Arts & Sciences.....	3	155	12	126	11	187	10	225	729	7	736	
Engineering.....	2	..	5	1	4	1	2	15	..	..	15
Home Economics.....	133	4	144	8	145	7	138	579	6	..	585	
Hotel Administration.....	1	5	..	1	3	3	..	8	21	..	21	
Industrial and Labor Relations.....	6	2	7	1	8	1	11	36	1	..	37	
Law.....	..	..	5	..	7	1	6	19	..	..	19
Veterinary.....	..	..	1	..	3	..	1	5	..	..	5
Graduates.....	..	..	..	..	..	..	..	..	..	218	218
Totals.....	4	342	23	320	30	401	28	447	1595	33	218	1846

PRESIDENT'S REPORT

SUMMARY OF EARNINGS OF WOMEN STUDENTS, 1947-1948

Term Time Placement (Women):

274 women students earned meals	value \$112,340.00
5 women students earned room	value 1,375.00
19 women students earned room and board	value 13,015.00

Total \$126,730.00

Part-time cash jobs filled by women students:

Occasional	289
Steady	382*

**Total 671

*Includes 30 jobs supplied in Home Economics departments.
 **Some students held more than one job.

It is interesting to note some comparisons in the numbers of women student employees working last year and the previous year:

- 1946-1947—15.75% of the women earned room, board, or both.
- 1947-1948—18.68% of the women earned room, board, or both.
- 1946-1947—345 placements were made in part-time jobs.
- 1947-1948—413 placements were made in part-time jobs.

During the year just completed 671 part-time jobs were held by women students in addition to 298 waitress and room jobs. (Not allowing for duplication) 969 jobs were held by women students out of an enrollment of some 1,600 undergraduate women.

It seems safe to say, certainly, that at least 50% of the women students were earning some share of their expenses during the academic year. The per cent would probably be much larger were it to include those women who earned during the summer months.

The term-time placement service has its heaviest load at the beginning of the school year, declines gradually until January when, after the Christmas recess, it again rises and maintains a fairly high level until the second semester is under way. During the past year, another fairly high demand came during May, when, presumably, students became short of money.

Summer Placement (Women):

- 1946-1947—145 sources of employment—252 applicants
- 1947-1948—175 sources of employment—259 applicants
- It has been impossible to get complete returns on placement, but in
- 1946-1947—30 known placements
- 1947-1948—60 known placements.

SUMMARY OF EARNINGS OF MEN STUDENTS—1947-1948

The particular work interest of regular students this year was in their own field of study. In this respect, this office cooperated with the schools or colleges requiring definite summer work experience, in addition to assisting other students seeking experience on their own initiative. High-income sales jobs, resort and camp positions were in demand. Eleven company representatives visited our campus to interview students for general summer jobs, as well as for summer training programs having future full-time employment possibilities.

This year, about 200 more men students registered for term-time employment. It is interesting to note that more cash jobs were accepted although the average rate of pay remained at \$.75 per hour. The overall picture indicates that more students wanted to work and more jobs were filled. The factors contributing to this condition were: (a) Better publicity concerning job possibilities; (b) More acute awareness of our centrally-located offices; (c) Diminution of savings and discontinuance of Government subsistence allowance by reasons of termination of individual eligibility; (d) Increased cost of living.

COUNSELORS OF STUDENTS

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SUMMARY OF ALL EARNINGS BY MALE UNDERGRADUATE STUDENTS

<i>Source</i>	<i>No. of Students</i>	<i>Amount</i>
University Residential and Dining Halls.	74	\$ 26,895.58
Balch-North		
Balch-South		
Risley		
Clara Dickson		
Cascadilla		
*Baker Cafeteria.	86	15,383.34
*Sage Cafeteria.	37	5,305.84
*Home Economics Cafeteria.	62	12,727.88
*Willard Straight Dining Halls.	184	24,738.56
Willard Straight Hall (Game Room, Desk, Library, and Check Room).	42	11,555.01
Fraternity and Sorority meal jobs.	553	144,880.39
**Cash jobs (Misc.).	576	28,627.46
Room jobs.	25	3,162.20
Proctors.	38	9,142.00
Room and Board jobs.	9	3,084.08
Local Restaurants.	15	2,900.00
Student Agencies.	41	14,629.31
Total.	1,742	\$303,031.65

*In addition, students who have worked a minimum of 18 hours per week were allowed 25%-40% discount on food in their place of employment.

**This item is low because of the number of those students whose earnings we were unable to trace.

Term-Time Work Statistics—Men

Registration for term-time work.	759
Calls for part-time workers:	
From University departments.	108
From Private Homes.	325
From business organizations.	90
From fraternities and sororities.	125
Total.	648
Student Earnings through above calls:	
87 students earned meals, value.	\$15,742.96
11 students earned month's room rent, value.	1,341.90
3 students earned room and board, value.	651.36
556 students earned through cash jobs*.	25,518.06
Total.	\$42,254.28

*In addition, students who have worked a minimum of 18 hours per week were allowed 25%-40% discount on food at their place of employment.

Includes cash earnings at Home Economics, Baker, Sage, and Willard Straight Hall cafeterias.

PRESIDENT'S REPORT

*Summary of Summer Placement Data
(Summer Full Time Employment—Men)*

Placements Reported.....	63
Calls:	
For Camp work.....	60
For other work.....	99
Registrations:	
For Camp work.....	73
For other work.....	575

(Summer Part Time Employment—Men)

Registrants.....	93
Calls for part-time workers:	
From University Departments.....	49
From Private Homes.....	121
From Business Organizations.....	19
From Fraternities and Sororities.....	4
Total.....	193
Student Earnings through Above Calls:	
5 students earned meal value.....	\$ 287.50
3 students earned month's room rent value.....	121.00
130 students earned through cash jobs.....	2,568.21
Total.....	\$2,976.71

SUMMARY OF STUDENT LOANS

	<i>No. of Loans</i>	<i>No. of Vets</i>	<i>Amount</i>
Chemical Engineering Loan Fund.....	17	12	\$ 2,971.14
Francis Leon Chrisman Endowment Fund.....	1	...	200.00
F. W. Guiteau Regular Loan Fund.....	391	324	44,010.12
Graduate Loan Revolving Fund.....	1	...	125.00
Women's Student Loan Fund.....	22	...	3,294.70
Special Guiteau Veterans Loan Fund.....	255	255	22,050.60
Non-Interest Bearing Loans to Veterans.....	294	294	23,116.00
Total.....	981	885	\$95,767.56

In connection with the administration of these loans and applications submitted thereto, 1,121 interviews were held. Each application was carefully checked, references consulted, reports submitted, and students notified of committee action. The Treasurer's Office, the College Secretary's Office, and the Student Adviser were notified by letter when loans were recommended.

The following table, figures for which were obtained through the courtesy and cooperation of the Department of Agricultural Economics in making a spot survey, is interesting to compare with a similar survey made in January, 1940. At that time, the average weekly rent for a single room in a man's rooming house was \$3.70, and the average weekly cafeteria meal expense for an unmarried man was \$6.17.

Summary of Student Cost of Living—December 1947

	<i>Single Male</i>	<i>Married (Family Expense)</i>
Weekly Rent.....	\$ 5.40	\$11.03
Weekly Food Expense.....	13.86	14.43
Semester—Books and supplies.....	33.04	29.98

RESEARCH

1. "A Study of In-Service Training Programs in Student Personnel for Graduate Students in American Colleges and Universities."
2. "A Program in International Education."
3. "An Evaluation of a Cornell University Dormitory Social Plan."
4. "A Sociometric Study of Relationships in a Dormitory Corridor."
5. "A Study of Chaperoning at Mixed Group Social Functions at Cornell University."
6. "University Housing for Graduate Women: Questionnaires on Social Needs."
7. A complete study was made covering the total number of scholarships held by women students and the amount. It was found that there were 350 women students holding 501 individual scholarships amounting to \$6,771.61.
8. An analysis of the results of the Freshman Questionnaire Study was made, and developed in such a way as to be of value not only to various schools and colleges, but also to groups such as the Freshman Orientation Committee and Residential Halls.

CHANGES IN OFFICE STAFF

Mrs. Marion Brown, who is now completing her Ph.D. in Psychology at Columbia University, has been engaged to develop the vocational counseling for women in our office. She will join our staff in September, 1948.

Miss Victoria Frederick, Assistant Counselor in charge of vocational counseling for women and the Social Calendar, has accepted a position as Counselor at the Cornell School of Nursing in New York City.

Miss Isabel Peard, who has been on a half-time basis with our office, in charge of student personnel administration laboratory work, will work with head residents and student deans as well as assist with general administration.

Miss Katherine Winsor now has charge of the Social Calendar, scheduling of social events and social advising in the office.

STUDENT PROBLEMS

An effort to remedy the problem of Cornell's loss of good students because of lack of scholarship aid has been attacked through President Day's Special Scholarship Committee. It is felt that in time this condition will be in large part resolved.

The problem of the human relations involved in determining which students are in the wrong fields of study, and the proper adjustment of these students is still a pressing problem. There continues to be a real need for the University to do more to assist students in finding themselves.

EVALUATING THE PROGRAM

As the office has grown and expanded in its services, and as new staff members have been added, every effort has been made to obtain staff with excellent technical training. Not only have new members been carefully chosen, but those on the staff have been encouraged through time off to take further graduate work in order to perfect their technical competence. As a result of these two efforts, the staff has made real professional progress.

Student contacts have more than doubled this year. Counseling service in the dormitories and in the office have been more nearly adequate for the student load. Advisory services for organizations have been more nearly in keeping with the demands, and work off and on campus has progressed more efficiently and with greater understanding.

There is still a need for more efficient clearing procedures throughout the campus to give added services to the student and better machinery to assist students who wish to transfer from one college to another. An effort will be made to extend our services to the students who for financial or personal reasons find it necessary to withdraw from Cornell. These exit interviews should take place in one hundred per cent of the cases.

LUCILE ALLEN,
FRANK C. BALDWIN,
Counselors of Students.

APPENDIX XXVI

REPORT OF THE DIRECTOR OF THE UNIVERSITY
PLACEMENT SERVICE

To the President of the University:

SIR: I have the honor to present the report of the University Placement Service for the year 1947-1948.

GENERAL

During the year, the demand from business, industry, government and private institutions for the services of college graduates was overwhelming. Two hundred organizations sent representatives to the campus and the majority of them visited us two or more times. The alteration of the Placement Service offices last summer providing for four interview rooms instead of two proved essential to accommodate these visitors.

The School of Business and Public Administration graduated its first class and almost all of these students registered with the Placement Service. Employers were eager to talk with these men and nearly every interviewer offered one or more of them jobs. The Business School encouraged recruiting trips from employers of non-technical personnel, which was beneficial to all students, particularly the "Liberal Arts" graduates. Non-technical recruiters prefer universities offering a broad selection of both "Liberal Arts" and Business Administration students, therefore the addition of this school will enhance the service offered to the student and the employer.

ALUMNI PLACEMENT

Table I (see below) indicates a strong demand for the services of experienced alumni, however the number of alumni seeking jobs has remained comparatively low, hence there has not been an appreciable change in the number of alumni placements. Many of our registrants, particularly the younger men and women, have good positions but wish to receive the bulletins of job opportunities to learn of opportunities for advancement. Our other bulletin, which is sent to industrial organizations and summarizes the qualifications of our registrants, increased in circulation from 1,100 to 1,400 during the year. This increase arose from unsolicited requests from business and industry.

TABLE I

ALUMNI PLACEMENT STATISTICS

	1948	1947	1946
<i>Ithaca Office</i>			
Number of Placements.....	38	35	31
Number of Positions Listed.....	1,828	980	1,177
Number of Active Registrants.....	313	330	347
Number of Inactive Registrants.....	3,365	2,979	2,558
<i>New York City Office</i>			
Number of Placements.....	86	97	65
Number of Positions Listed.....	1,828	981	850
Number of Active Registrants.....	235	195	230
Number of Inactive Registrants.....	3,333	3,015	2,658

SENIOR PLACEMENT

Fortunately this year's senior class was large enough to satisfy recruiters' requests to interview students at Cornell. Last year so many companies, in proportion to the number of men graduating, visited the campus that students had neither the time nor the inclination to see all of these representatives. Many companies interviewed too few men to make their recruiting trips worth while. This year, student interest in

interviews remained high throughout the year and almost every company talked to a representative group of students. Exceptions to this favorable situation were in the fields of finance, insurance and public utilities where some representatives, due to student disinterest in these fields, failed to interview an adequate student representation. This disinterest, although by no means unique at Cornell frustrated our efforts to have all companies interview a representative cross-section of the senior class.

There were fewer general requests for women than in past years, however, as usual there were still opportunities for those with qualifications or interest in merchandising, chemistry, physics, and market research. The present woman graduate is reluctant to adjust her qualifications to meet the employer's demands and hopefully expects to have the employer retailor his established business in order to include inexperienced college graduates. Unlike men, most women feel no urgency in making a decision regarding a job and the percentage accepting positions immediately upon graduation is somewhat lower than among the men. (See Table II on page 182.)

Table II indicates that about 25% of Cornell male graduates had no definite plans for employment or further study at the end of the year. Probably half of these individuals could have obtained employment if they desired but, unfortunately, at least half of this group must make serious adjustments if they are to obtain positions of responsibility commensurate with their educational background. These individuals require aid beyond that offered by the Placement Service and need help such as that offered by the Counselor of Students, therefore we are looking forward to continuing and expanding cooperation between this office and the Counselor of Students.

SUMMER EMPLOYMENT

We have continued to use our established contacts with business and industry to obtain summer jobs for students. Actual contact with students to fill these openings is made through the Counselor of Students Office. As more and more employers are finding it advantageous to hire undergraduates during their summer vacations as a trial period prior to full-time employment after graduation, the Placement Service is actively interested and engaged in summer employment and works closely with the part-time employment office of the Counselor of Students.

PRESIDENT'S REPORT

TABLE II
EMPLOYMENT OF 1947-1948 GRADUATES

PLACEMENTS REPORTED TO THE SERVICE AND THE SEVERAL COLLEGES AND
DEPARTMENTS AS OF JUNE 30, 1948

College	Positions Reported	Continuing Studies	Total Class	Per cent Unemployed or not Reporting		
				1948	1947	1946
<i>Agriculture</i>						
Men.....	100	46	194	25%	24%	41%
Women.....	22	6	53	45%	56%	52%
<i>Architecture</i>						
Men.....	20	2	24	8%	35%	42%
Women.....	5	3	9	11%	not reported	
<i>Arts and Sciences</i>						
Men.....	105	141	344	26%	30%	68%
Women.....	55*	32	240	64%	66%	70%
<i>Business and Public Administration</i>						
Men.....	23	0	32	10%	....	....
Women.....	1**	0	1	0%	....	....
<i>Engineering</i>						
Men						
A. E.....	47	3	68	27%	45%	0%
C. E.....	71	6	108	29%	38%	0%
E. E.....	67	5	89	19%	28%	0%
M. E.....	127	12	178	22%	48%	0%
Ch. E.....	32	2	39	13%	18%	0%
*Eleven married. **Getting married.						
Women						
C. E.....	2	0	2	0%	not reported	
E. E.....	0	0	1	100%	not reported	
M. E.....	2	0	2	0%	not reported	
<i>Home Economics</i>	62	14	168	55%*	30%	55%
<i>Hotel</i>						
Men.....	73	1	83	11%	13%	7%
Women.....	6	0	7	14%	not reported	
<i>Industrial and Labor Relations</i>						
Men.....	37	13	70	28%	36%	....
Women.....	5	2	12	41%	not reported	

*Eleven married.

**Getting married.

*Twenty-four are married and 13 will be this summer.

JOHN L. MUNSCHAUER,
Director of the University Placement Service.

APPENDIX XXVII

REPORT OF THE DEAN OF THE SCHOOL OF NURSING

To the President of the University:

SIR: I have the honor to present the report of the School of Nursing for the year 1947-1948.

FACULTY

The School has lost a distinguished member of its Faculty in the death of Dr. Henricus Stander in May 1948. Dr. Stander, Professor of Obstetrics in the Medical College and President of the Medical Board of the Hospital, had been one of the two members of the Medical College Faculty on the Executive Faculty of the School of Nursing since 1942.

Miss Margaret Joinville, Instructor in Psychiatric Nursing, became Acting Director of Nursing of Payne Whitney Clinic on October 1, succeeding Miss Eleanor Corrigan, who had been acting in that capacity since the beginning of the school year. On November 10, Miss Eva Poor, formerly Instructor in Out Patient Nursing, assumed her new duties as Head of the Private Patients Nursing Service and Assistant Professor of Nursing, relieving Mrs. Helen Miller, Acting Head.

Again this year our school has been proud to have one of our faculty appointed to an important post abroad. Miss Esther Lipton, Instructor in Obstetrics, left in May to assume a position with the Joint Distribution Committee in Europe. Her preparation, which combined hospital and public health experience and midwifery, gives her the unusual background so necessary for this work and yet so difficult to find.

The appointment of an Instructor in the Private Patients Department, an Instructor for Eye, Ear, Nose and Throat nursing, and two assistants (one evening and one night) in the Medical and Surgical Department, all of whom combine their teaching with hospital supervisory responsibilities, has facilitated instruction for both students and staff.

The Faculty has been engaged in a re-examination of their duties with special reference to the relationship between the Executive Faculty and the general Faculty.

I should like through this report to thank the many doctors and other hospital personnel who have helped with teaching programs of the school and the In-Service educational programs for the nursing staff in all clinical departments. We have appreciated also having in attendance at the meetings of our Faculty and Executive Faculty the new President of the Joint Administrative Board, Dr. Stanhope Bayne-Jones.

ADMISSIONS

In September 1947, a class of 50 students was admitted. This is the second year in which all students in the class have had two or more years of college before admission. The students came from 34 different colleges or universities, the largest number from one place being from Cornell (8). This class has made a good record in the school.

For September 1948: To date 48 students have been accepted and are planning to enter the school, and there are 21 applications still under consideration.

Requirements for admission: No change has been effective this year and only the following modification of procedure is planned:

Beginning with the class to be admitted in the Fall of 1949, all applicants to the school will be required to take the Pre-Nursing Tests offered by the National League of Nursing Education in place of the tests previously required. This will make possible comparison of our entering students with other college students not entering nursing and thus lead to more information on the scholastic level necessary to achieve success in this field. These examinations also offer a better base line against which instructors can measure student achievement in the school.

PRESIDENT'S REPORT

ENROLLMENT, 1947-1948

		<i>Completion Enrolled as of during year June 30, 1948</i>
<i>Three-Year Course</i>		
First year students.....		44
Second year students.....		26
Third year students.....	92	42
Total basic 3-year course.....	92	112
<i>Courses for Affiliates, seniors of other schools and graduate nurses</i>		
Affiliating students (4-8 mo.).....	70	23
Senior students of other schools i.e., cadets, special (2-6 mo.)	18	9
Post-graduate students		
N. Y. H. courses (4-6 mo.).....	80	20
Field students from Columbia Univ. (part time or 4 weeks full time).....	32	0
Total.....	200	52
Grand Total.....	292	164

DEGREE STATUS OF STUDENTS COMPLETING THE BASIC 3-YEAR PROGRAM DURING THE YEAR

<i>Class</i>	<i>Completing Course</i>	<i>Degree Students*</i>	<i>Diploma Students</i>
September 1947.....	57	48	9
February 1948.....	35	23	12
	92	71	21

*This does not indicate at which Commencement degree was granted.

SCHOLARSHIPS

We have been exceedingly fortunate in a generous contribution to our Scholarship Fund in May from the Cornell University-New York Hospital Committee for Scholarships. A committee, active all through the war as a Red Cross unit connected with the Hospital, was reconstituted last Fall as a committee for scholarships for the school. Through their efforts in obtaining the interest of members and in conducting a benefit held in the Residence in the Spring, a check for \$2100 was presented to the Dean by the Chairman, Mrs. Norvelle LaMar, at the annual meeting of the Committee in May. Our funds for scholarships were practically exhausted and the contribution of the Committee, as well as their general interest and support, is greatly appreciated as the scholarships will help in encouraging good students to obtain preparation in this important field. Although the cost of the three years to the student is considerably less than for the usual academic years, her total of five years in preparation for nursing delays her earning period a full year beyond that of the usual college student.

Five scholarships of \$300 each were awarded to outstanding candidates admitted in September 1947 and in addition, eight students received grants during the year amounting to \$100 or \$150 each and totaling \$1000. For students entering in the Fall of 1948 five scholarships of \$100 each will be awarded.

COUNSELING OF STUDENTS

Beginning July 1, 1947 a new plan was put into effect which gave the Assistant Dean the main responsibility for direct counseling of students and for assisting other members of the faculty in this respect. This plan, in itself an outgrowth of experience which indicated that more time was needed for this activity than could be given in

the main administrative office, has this year led to the recommendation that a full-time counselor, preferably not a nurse, be added to the faculty. The Council of the School in its meeting in December also went on record as recognizing the importance of providing a sound counseling program through a full-time counselor. At the request of various staff and faculty members who were seeking special help in counseling, a thirty-hour course in Personnel Administration was offered at the school by the Extension Division of New York University. During the Spring, eighteen members of the hospital or school staff including assistant head nurses, head nurses, supervisors and one department head completed the course.

A new position as Counselor of Students has been established and in September 1948, Miss Victoria Frederick who has been an assistant counselor on the Ithaca campus for two years will begin her work in this position. This is a very satisfactory culmination of several years of careful planning, experimentation and re-examination of possible arrangements, to which many members of the faculty have given considerable time and in which the entire faculty has participated.

CURRICULUM

The re-establishment of a two months' field experience with the Visiting Nurse Service of New York, suspended during the war, marks a significant step in the accomplishment of the aim of the school. Seniors in the degree program in the class of September 1948 received the experience and in the coming year it is planned for the entire senior class, all students, beginning with this class, being degree students. Shortage of staff in the public health agencies made it impossible for the Visiting Nurse Service to accept any students for an experience of this sort during the war and conditions still make it necessary for the agency to limit greatly any offering to students in the basic curriculum. The affiliation has been made available to this school in anticipation of our accreditation as a school offering a program with all-round emphasis on prevention of illness and health teaching and preparing for first level positions in public health nursing as well as in the hospital field. Our students have measured up well in this experience and its value as part of the preparation for nursing is apparent in their development.

Other than the re-establishment of the experience in public health nursing, no major changes in the curriculum have been made. Minor changes have been made in every department to bring about more patient-centered and family-centered care and teaching. In spite of the inevitable difficulties which accompany the pressure of work on every floor of the Medical Center in which students have been assigned, faculty and staff have never lost sight of their object to bring about in the student an appreciation of the patient as a person and as a member of a family and a community. The operating room, the out-patient and all in-patient services have endeavored to set up their services to patients and their teaching in such a way as to make this more effective. The case method of assignment advocated as a basis for good patient care as well as for good teaching, but in use only in one department, was extended on an experimental basis with promising results. Where administrative difficulties have been overcome, this has resulted in an increased sense of security on the part of patients and a greater sense of accomplishment on the part of students. More help to patients on health and dietary needs and greater use of reference materials have resulted.

First year students in the Medical and Surgical Department have made detailed studies of selected patients assigned to them for care and have presented them to small groups of fellow students at nursing clinics under the guidance of a supervisor who was in close touch with the patients and with the work of the students as well. All faculty members who observed or participated in these exercises were impressed with their excellence. This method is particularly well suited to the organization of the students' knowledge in such a way that she puts it to work in giving better care to specific patients. Only by the careful and intensive use of such methods can the educational benefits of our excellent clinical facilities be realized. In the pediatrics out-patient department, the family studies have emphasized the child as a member of a family unit, the guidance of the parents in the hygienic and developmental needs of the child, and the influence of such factors as play-ground facilities and customs arising out of nationality differences. In the Private Patients

Service the establishment of a new position of instructor has brought to the fore that patients of this economic level are often as much in need of health guidance and of help in adjusting to a prescribed medical regimen as are patients with economic handicaps.

The early ambulation period in patient care and shortened hospital stay have necessitated better patient teaching and to some extent the speeding up of this phase of care. This has pointed out the student's needs for full information about her patients from the first day of her assignment to allow her to fulfill her teaching obligations as part of her nursing responsibility.

Beginning next year the course in Social and Health Aspects of Nursing will be given early in the first year instead of in the second half of the first year. This introduction to the social factors affecting health and to problems in the prevention of disease will therefore accompany the beginning course in nursing.

We must work for further extension of each case assignment combined with still better guidance of students at the bedside as a means of strengthening all areas of the curriculum.

THE UNITED STATES CADET NURSE CORPS

The United States Cadet Nurse Corps with its accelerated program goes out of existence with the class which graduates in September 1948. In the class of February 1948, seven students were assigned to Federal Service for their Senior Cadet period—four to the Indian Service and three to the Veterans Administration. In the class of September 1948, one student has been assigned to the Indian Service.

We have had a gratifying experience with the Senior Cadets from other schools who have been accepted for their cadet period of five to six months with us. There have been 27 students representing nine schools located in Tennessee, Missouri, Massachusetts, and New York states.

STATE BOARD EXAMINATIONS

A total of 92 graduates of the school took the State Board Examinations for registration this year in the months of October, January, and May. All who took the October and January examinations have passed, but the reports are not in as yet on the May examinations.

TEACHING EQUIPMENT AND FACILITIES

Audiovisual aids have been used more than heretofore. Our new moving picture projector has completed its first year. The New York Tuberculosis and Health Association and the Metropolitan Life Insurance Company have been generous in placing films and film strips at our disposal without charge. Other films have been rented from the New York University Film Library. Both the New York State and the New York City Departments of Health have invited us to use their Health Education materials. The increase in number and the improvement in quality of health films suggests an even more extensive use in the future. Consideration should be given to setting up a central plan for reviewing, storing, and cataloguing of films in connection with our own library.

As usual the neighborhood librarians, especially the 67th Street Branch of the New York Public Library, have given cordial and helpful attention to our students who are referred there for certain materials not available in our specialized library. One impressive difference between students with college background and those without it is the greater initiative and system which the college student displays in searching out materials and in putting them to use in accomplishing her purpose in nursing.

With the universal pressure for expansion of hospital facilities which necessitates putting every available space to use in the care of patients, it is difficult to keep the need for conference rooms sufficiently to the fore. We have been fortunate this year in obtaining a badly needed extra office, or conference room, in the Surgical Department, in the Woman's Clinic, and in the Private Patients Department. Since such an important part and amount of the preparation of the nurse is carried out in the active working situation, rooms for small conferences and for uninterrupted interviews must be located on the units where the students are assigned.

In the Pediatrics Out Patient Department a room where teaching material for parents may be displayed and where individual and group conferences with parents may be held is still very much needed.

The program in Physical Education, of particular importance to the nurse because of the significance of good body mechanics and her responsibilities in teaching health, has been increasingly limited by the loss of out-door space. The installation of air-conditioning in the basement playroom of the Residence would help in some measure to make up for this.

STUDENT HEALTH SERVICE

The Supervisor of the Infirmary and Health Service has described this year as "a phenomenally quiet year." There was a decrease in the amount of illness. Fewer students were ill and they were ill for a shorter period of time. The reason for this reduction in illness is unknown but our record seems to reflect the uniformly good health conditions which, according to our school physician, characterized the city as a whole. The average number of days of illness per student was seven, which compares favorably with eleven days last year and thirteen the year before.

The nature of illnesses show that, as usual, upper respiratory infections and gastrointestinal disturbances head the list and in that order.

It is noted that although illness was decreased, more nurses were off duty this year because of fatigue and emotional upset than we have noticed in previous years.

COURSES FOR GRADUATE NURSES

The year has been marked by progress in three different phases of this area of our work:

1. Approval was obtained for the discontinuance of the present courses regularly offered to graduate nurses.
2. All clinical department staffs have explored the potentialities of their departments for setting up programs on an advanced level.
3. Field programs for a few graduate nurses registered at Teachers College, Columbia University, have continued to be offered here.

The schedule for discontinuing the six months' courses offered since 1932 to graduate nurses is as follows:

Surgical Nursing	April 30, 1948
Obstetrical and Gynecological Nursing	April 30, 1949
Psychiatric Nursing	March 1949
Operating Room Nursing	April 30, 1949

These courses were not of a university level in entrance requirements, curriculum or quality of work expected. The recommendation of the Faculty to discontinue them was made after repeated efforts to adjust assignments, content and teaching methods with results considered to be entirely unsatisfactory in spite of the great amount of time given to these students. The unevenness of applicants both in numbers and in quality was a matter of concern and necessitated advancing the date for discontinuance in the case of the Surgical Nursing course and may affect the remaining courses still scheduled. The discontinuance of these programs will be to the advantage of our regular staff because the time required for teaching, supervision, and administration of these courses can now be devoted to our own employed staff. If we are to offer any courses for graduate nurses, we believe we should plan programs which will make the best use of our unusual clinical facilities and well-prepared faculty.

Based on the progress made in recent years elsewhere in setting up clinical courses on a truly post-graduate level, the Faculty in our various clinical departments has drawn up tentative proposals for programs which might be offered in these specialties. In view of the great need for good clinical background for all advanced positions and the unusually good combination of clinical facilities and faculty in this center, it is the recommendation of the Committee on Courses for Graduate Nurses that we devote our attention to clinical field courses on a university level for graduate nurses enrolled for their academic work in other universities. Many steps need still to be investigated and discussed before any new program is tried.

Registration in the New York Hospital Clinical Courses this year: Eighty graduate nurses completed the six months' courses offered and twenty students are enrolled as of the last day of June.

Field Students from Teachers College, Columbia University: In cooperation with the Nursing Education Department of Teachers College, 32 graduate nurses registered at the College received field practice at the Medical Center. The clinical departments in which the students were studying were Medicine and Surgery 18, Pediatrics, including newborn nurseries of Woman's Clinic 11, Psychiatry 3. This was a continuation of the plan in operation the previous year. More adequate provision is needed for directing the field work of these students either from the College or from our faculty. Schools, hospitals and other medical services must lean heavily on these programs for the instructors and supervisors so badly needed.

COURSES FOR AFFILIATING STUDENTS

We have continued to offer one or two clinical courses including experience to students from four schools of nursing which include one collegiate school and three hospital schools as follows:

<i>School of Nursing</i>	<i>Clinical Course offered</i>	<i>No. of Stu- dents Complet- ing 1947-48</i>
Skidmore College.....	Obstetrics 16 weeks	26
Department of Nursing Saratoga and New York City		
Burbank Hospital School.....	Pediatrics 16 weeks	12
Fitchburg, Mass.		
Samaritan Hospital School.....	Pediatrics 16 weeks	17
Troy, N. Y.		
Moses Taylor Hospital School.....	Obstetrics 16 weeks	
Scranton, Pennsylvania	Pediatrics 16 weeks	15
Total.....		70

After this school year the affiliation will no longer be offered to the Samaritan Hospital School, as a disproportionate amount of individual instruction and review was found necessary to bring these students to a point where they might benefit from the instruction offered in Pediatrics. Students from the Presbyterian Hospital School in Newark will be accepted next year for the first time.

It is evident that the students from the hospital schools have not been prepared to accept teaching on a level which seems entirely necessary if the nurse is to be equipped to meet her responsibility, and we have questioned how much we should endeavor to make up for general deficiencies.

COMMENCEMENTS

Ninety-two students graduated during the year, 57 in September 1947 and 35 in February 1948. This is the largest number ever graduated from the school in a single year and is the last of the war admissions with two classes a year.

We were honored to have on each occasion a former Director of the School as speaker: In September 1947, Miss Annie W. Goodrich, class of '97, Director 1902 to 1907, and in February 1948, Miss Anna Wolf, Director 1932 to 1940.

THE FUTURE

We should increase our enrollment in the school above our pre-war size. There has been an encouraging increase in the number of high school students and parents who have come to us for counseling on how to proceed with the college preparation necessary for admission. A still greater place for the social sciences and more leeway for clinical teaching are needed to strengthen our program and they will in turn attract and hold more of the type of young women so badly needed

in nursing. We look forward with considerable interest to the forthcoming report on schools of nursing in the United States being prepared under the auspices of the National Nursing Council on a grant from the Carnegie Foundation for the Advancement of Teaching. This report, to be published in the early fall by the Russel Sage Foundation, points out the necessity of university preparation for nursing. It should bring a better understanding of the unusually fine possibilities for the education of nurses which the combination of the university and medical center provide.

VIRGINIA M. DUNBAR,
Dean of the School of Nursing.

APPENDIX XXVIII

REPORT OF THE DIRECTOR OF VETERANS EDUCATION

To the President of the University:

SIR: I have the honor to present the report of the Office of Veterans Education for the year 1947-1948.

For the first time since this Office was established, four years ago, the net total of veterans' enrollment decreased from the previous year, from 6,227 to 6,033. Numerically the difference is small and unimportant; its significance is that it marks the beginning of what should prove to be a continuous and accelerating decrease in the veteran population of the University. Proportionate to the total number of men students on campus the decline is more marked, 65 per cent for this year against 73 per cent for 1946-1947. The highest veteran enrollment for any term was 5,201 in the fall of 1947. By the fall term of 1950, the number should be less than 1,000 for the first time since 1945.

Running counter to this general trend are both the proportion and number of married veterans. An average of 1,435 married veterans, or about 30 per cent of the veteran total in the regular terms this year, compares with 25 per cent and a total of 1,300 for last year. Housing for these veterans, which has been critical throughout the last two years, is expected to ease little in 1948-1949; an apparent current increase in student marriages may create a significant lag in the decrease of married veterans as compared with the total veteran enrollment.

The veteran's family has continued to present a unique phase of campus life, a twilight zone in which the wife is neither student or townswoman except as she may cast her lot one way or the other. For the most part she is just the student veteran's wife and as such she affiliates herself with other "Vets' Wives" in a world of their own. Formally, she is likely to belong to the Veterans Wives' Committee of Willard Straight Hall. Assisted by the Social Director of Willard Straight Hall and the Coordinator for Family Affairs in this Office in planning and developing a tenable way of life on the campus, these student veteran families have a proud record of accomplishments for the year 1947-1948. Through their own initiative and enterprise they have operated their own cooperative grocery, nursery school, and news bulletin. They had also during the year their own radio program, a charm school, a series of talks by local physicians on pre-natal care, and a unit of the League of Women Voters.

The Cornell Guidance Center completed its fourth year of testing and advisement with a cumulative total of over 6,500 cases, 1,503 of these accomplished during 1947-1948. The Center rendered professional guidance service to a small number of non-veterans in the Ithaca area who requested assistance, and provided psychometric service upon request to the Ithaca Municipal Civil Service Commission. The Center also continued to serve as an important training and research facility for mature students in psychology, education, guidance, counseling and personnel administration. Five staff members left during the year to accept attractive permanent positions secured largely because of training received at the Center.

PRESIDENT'S REPORT

VETERAN ENROLLMENT 1947-1948

<i>Summer Courses</i>	<i>Fall Term</i>	<i>Spring Term</i>
2145	5114	4891
Total Enrollments.....		12,150
Less Duplicates.....		6,117
Total Veterans Enrolled.....		6,033

ENROLLMENT BY SCHOOLS AND COLLEGES

	<i>Summer</i>	<i>Fall</i>	<i>Spring</i>
Aeronautical Engineering.....	..	..*	13
Agriculture.....	92†	805	768
Short Courses.....	..	20	19
Architecture.....	42	133	131
Arts and Sciences.....	..	944	891
Business and Public Administration.....	19†	60	68
Engineering.....	86	1628	1517
Chemical.....	(21)	(237)	(195)
Civil.....	(65)‡	(314)	(294)
Electrical.....	..	(433)	(429)
Mechanical.....	..	(616)	(587)
Engineering Physics.....	..	(11)	(12)
Materials Processing (Short Shop Courses).....	..	(17)	..
Extramural Courses.....	..	41	21
Graduate School.....	260	584	583
Home Economics.....	..	15	15
Hotel Administration.....	55†	268	269
Hotel Unit Courses.....	68	..	..
Industrial and Labor Relations.....	58†	200	189
Law.....	162	313	299
Nutrition.....	..	7	13
Summer Session I.....	1135	..	..
Summer Session II.....	168	..	..
Veterinary.....	..	96	95

Average for Year

Married Veterans.....	1435
Children.....	675
Canadians.....	25
Disabled Veterans (Public Law 16).....	475

*Included under Graduate School.

†Cooperative Training, whereby a veteran obtains V. A. benefits during his required periods of work practice or internship.

‡Summer Survey Camps I and II.

LOREN C. PETRY,
Director of Veterans Education.

APPENDIX XXIX

REPORT OF THE DIRECTOR OF THE DIVISION OF
EXTRAMURAL COURSES

To the President of the University:

SIR: I have the honor to present the report of the Division of Extramural Courses for the year, July 1, 1947 to June 30, 1948. During the year the Division has been served by three Directors, Professor J. E. King until November; Professor Winsor until December 31; and the present incumbent.

Over the period since its establishment in 1935, there has developed the need for formulation of policy consistent with development of the Extramural Division as a part of the University program and in its relationships with other parts of the University. This need has been accentuated by those same rapidly changing influences affecting other educational services of the University in recent years and in addition it may have become more acute since 1945, by reason of the frequency of change in personnel in the Directorship of the Division.

Since January 1, 1948, considerable attention has been given to review and development of policy and program of the Division. The recent appointment of an Advisory Committee for the Division, representing those Schools and Colleges most directly concerned with present Extramural activities, should prove valuable in guiding policy and operation of the Division and at the same time increase understanding within the University of the function and program of the Division.

During the summer, 1947, three courses were offered in seven centers in the State, largely serving teachers in Vocational Agriculture and Agricultural Extension workers. These courses were offered in cooperation with the Poultry, Vegetable Crops, and Rural Education Departments. Sixty students were enrolled.

During the fall term 1947-1948, one course was given in Elmira in cooperation with the School of Industrial and Labor Relations and three courses were offered in Buffalo in cooperation with the College of Engineering. Sixteen students were registered at Elmira and a total of 78 was enrolled in the three courses at Buffalo, giving a grand total of 94 students in all off-campus courses.

In addition to the registration in Extramural courses during the fall term, the Division registered 66 part-time, non-resident students in on-campus courses for a total of 245 hours of credit.

Fifty-two students were registered in three Extramural courses during the spring term, taught in three centers—Elmira, Corning, and Farmingdale, Long Island. The latter was in cooperation with the Extension Division of the School of Industrial and Labor Relations, and made possible the granting of University credit to certain members of the class which, predominantly, was composed of Extension enrollees. The two courses at Elmira and Corning were made possible through the cooperation of the Department of Rural Education.

The Division has enrolled, during the spring term, 78 part-time, non-resident students in on-campus courses for a total of 313 credit hours. Over half of these students are teachers or hold other positions in the public schools of the surrounding area. Most of the remainder of the enrollees are in professional occupations. Only two students are seeking credit toward an undergraduate degree in Cornell University. Forty of the 78 students were candidates for advanced degrees at the time of registration. Eight different Schools and Colleges were represented by the courses for which the 78 students were registered. Twenty-four different departments in these Schools and Colleges were represented.

It has seemed desirable to clarify the distinction between extramural students and courses and those part-time, non-resident students registering through the Division for work in on-campus courses. Through meetings with representative members of Colleges and Schools most concerned and with representatives of the offices of the Treasurer, Registrar, Admissions, Summer Session, and Veterans' Education, the necessary clarification is becoming understood and accepted. The assistance of the newly appointed Advisory Committee has been helpful at this point. The need remains for extension of this understanding, as well as that of more

complete understanding of the function and program of the Extramural Division, with the Faculty of the University. It is my belief as Director, that the Division will function to play its proper part in the total program of instructional service offered by Cornell University to the extent that the Faculty of the University supports the policy and program of the Division. To this end it is proposed to maintain close relationships with the Faculty, subject matter Departments, and the various Schools and Colleges of the University in developing the program of the division.

W. A. SMITH,
Director, Division of Extramural Courses.